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# ILLINOIS MEDICAL JOURNAL

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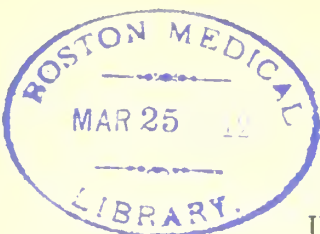


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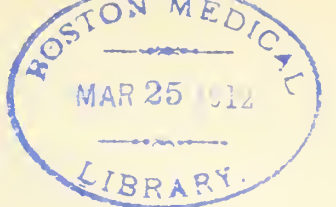
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## ORIGINAL ARTICLES

### THE ABUSE OF MEDICAL CHARITIES IN CHICAGO.\*

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CHICAGO.

Gentlemen, we are responsible for the abuse of medical charity as it exists in Chicago at the present time. Fortunately we are by our mode of life peculiarly fitted to consider it, assembled, as we are, in consultation on a case vitally concerning the future of medicine in this city. It is not necessary for me to ask you to approach it with that earnestness, that calmness and respect for one another's opinion which men of our profession can command when a patient is in question. What we desire for medical charities is to put it in its true position.

The object of this paper is to call attention to the following facts: 1. The enormous amount of gratuitous work now being done by the physicians of this city every year. 2. The acknowledged ability of a very large proportion of so-called charity patients to pay for services rendered. 3. The injustice of requiring physicians to treat well-to-do people in our public and private hospitals for nothing.

The conditions under which medical charities have heretofore been administered can only be characterized as a condition of anarchy, without supervision, order or system. For many years the subject for medical charities and especially dispensary charity has engaged the attention of some of the brightest minds in the profession. It has been estimated that probably half the population of New York and Chicago receive free medical and surgical treatment.

The medical profession the world over, by a studied indifference to the commercial side of its existence, has placed a large number of very embarrassing obstacles in its road to prosperity and success. In our rantings against commercialism which are usually devoid of common sense, we have nearly lost sight of the true meaning of the word. We

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\* Read before the October Meeting of the North Shore Branch of the Chicago Medical Society.

have so far forgotten the simple, common-sense principles of every-day business affairs, which make it possible to live at all, that every manner and kind of associations can make tools of many of us at any time they wish for any sum they wish to pay.

It is said that the abuse of charity has worked more mischief and brought more misery in its wake than have pestilence and famine. The first stimulus to labor is hunger. What need to work when the necessities of life may be had for the asking? Why be careful to observe the laws of health when advice and medicines are free? The beneficiary of charity will grow shiftless and lazy. Thoughtless charity has made the tramp and nurtures the discontent of the anarchist. It makes possible the professional beggars, against whom we are warned from time to time by organized charity associations. Indiscriminate medical charity must bear the responsibility of a large part of the degradation and dissatisfaction of mankind. "A man who would scorn to take other things without pay lies to the doctor for free advice." Thus we see that the dispensary gives the first lesson in indigence and degradation.

Ever since the world began we are told that man has been seeking to obtain something for nothing, a corrupting desire, pauperizing and degrading in its effect. The first thing a man or woman will accept as charity is medical attendance. The first step to pauperism taken, the second is easy. A man begins by taking what he should not receive, begs what he does not deserve, demands as a right that to which he is not entitled, not only free medical service, but free food, free lodging, free clothing and fuel.

It is shameful that hospital and free dispensaries which are such worthy charities in theory have become dangerous menaces to society in general, owing to the fact that they are demoralizing, pauperizing the shiftless and lazy by encouraging begging and dependence on charity to such an extent. Persons who can well afford to pay for their treatment and medicine have become so hardened and brazen that they will stand in line for hours awaiting their turn that they may receive even their medicine for nothing. Formerly it was a sign of poverty, or at least something of a reflection upon a person's financial standing, for him to go to a dispensary or public hospital. Modern methods, however, have changed all that and have encouraged people to flock to hospitals and dispensaries, both public and private, as never before. The community has come to feel that anybody and everybody are at liberty to avail themselves of the benefits of these charitable institutions.

Three classes of patients patronize charities: 1. Those able but not willing to pay. 2. Those who, not knowing a specialist, want to find one without being compelled to pay a specialist's fee. 3. The poor, suffering unfortunates who, because of poverty, are forced to avail themselves of a medical charity. A large factor in the use and abuse of dispensaries is that the public has found out, or thinks it has, that they are the best as well as the cheapest places in which to obtain the services of the leading physicians and surgeons.



Another cause for medical charity has been the demand by the medical schools for free clinical material. It is to the interest of those connected with the institution to have, if possible, a large service. It means wider experience, it lends prestige and opportunities to do operations, thereby increasing the skill of the operator. Should the department be surgical in character, increased reputation as a surgeon, and consequently a larger clientele, the same will hold good in other departments of a hospital dispensary.

It is a noteworthy fact that the hospital or dispensary doctor usually gets practice more quickly than one who has no connection with an institution. Therefore, many physicians, the sooner to acquire a reputation, organize a hospital or dispensary, and, of course, the public takes advantage of these, as the public always will where it can get something for nothing or as little as possible. Churches, too, in order to increase their temporal power and at the same time find an outlet for their charitable impulses, have been prolific in organizing dispensaries. With the multiplication of these medical charities the effect upon the profession began to make itself felt until it has reached its present gigantic proportions. I have seen at dispensary clinics patients wearing diamonds, gold rings and other jewelry. They occasionally come in carriages, clothed in fine raiment, decked with jewelry.

In the various departments of dispensaries I have repeatedly seen policemen, firemen, letter carriers and other men earning easily \$80 a month and upwards. Again, there is often seen at the dispensary the rich, decked in poor clothing, the lawyer and broker with incomes running into thousands per year. I recall a certain patient who applied for treatment at a dispensary and was, he said, unable to pay anything for treatment, yet he owned nearly \$75,000 in unincumbered real estate. With some it actually becomes a matter of pride. One of my own patients who is quite wealthy confessed to me that she dressed up in old shabby clothing to go to a dispensary.

It has been estimated that fully 50 per cent. of charity patients are persons whose financial position puts them wholly beyond the scope of charity, and that an extremely small per cent. represent extreme poverty. This means that fully 50 per cent. of the funds provided for charity of the poor to whom it rightfully belongs is diverted by the rich. These wealthy paupers are nothing less than criminals, guilty of obtaining under false pretenses that which does not belong to them. They cheat both ways, the poor to whom belong treatments and the physician who is worthy of his hire.

The desire to get something for nothing is not entirely responsible for the dispensary abuse. It seems to me that practitioners are somewhat to blame. There is a certain class of physicians who, either from incompetency, laziness or because the fee is not sufficient, send cases of simple surgical operations to the dispensary; operations that they should be able to perform easily, and in this manner create the hospital habit in the patient. Many of these physicians furnish the after-treatment in their offices and pocket the fees. Again, there are physicians who have

the habit of bringing patients quite able to pay to the dispensary physician for free consultation. It is often hard to refuse for the sake of old acquaintance, perhaps, but, on the other hand, it robs the specialist of a fee and helps to swell the ranks of the dispensary patients. The patient, however, having found the dispensary a good place to go, will in many instances, when he needs further medical aid, avail himself of the privilege, only this time without consulting his short-sighted physician.

In order to further emphasize the extent of the dispensary abuse in this city, I take advantage of this opportunity to present to you the report of the Committee on Abuse of Medical Charities of the Chicago Medical Society. A summary of their report follows: There are in Chicago 55 dispensaries, 16 of which are connected with hospitals, 9 with medical colleges, while 30 have no connection with any such institution. Of these 55 dispensaries, 27 are used for clinical instruction, 7 are privately owned; in 6 medicine and treatment are furnished free; in 18 a charge is made to cover the cost of medicine, and in 23 as much money is collected from the applicant as can be obtained. The smallest fee recorded is 5 cents and the largest \$10, which latter amount is charged by maternity dispensaries. Only 5 dispensaries exhibit signs announcing that treatment is limited to the sick poor; 26 dispensaries claim to investigate the ability of the applicant to pay.

Investigation by the committee shows that in 51 of the 55 dispensaries the only investigation instituted consists of a few questions put by the physician in charge, the object of which the applicant at once discovers and answers accordingly. One dispensary refers the cases of doubtful applicants to the Chicago Bureau of Charities for investigation; 3 employ a clerk to look up suspicious cases. During the last year 29 dispensaries treated 223,110 persons; in 26 which were run in a slipshod manner no records are kept of the number of patients treated; 16 dispensaries report the number of times each person returns for treatment. During the last year these 16 dispensaries treated 93,806 persons and treatment was 246,140 times. The number of applicants refused treatment on account of their ability to pay outside physicians was 1,170. In many cases, on investigation, the applicants for relief were found to be property owners, well-to-do citizens or persons drawing comfortable salaries.

It will be seen from this report that 29 institutions treated 223,110 persons; that 26 dispensaries kept no record of the number of applicants treated, but the committee, after careful deliberation, taking into consideration the size, object and location of these institutions, estimated the number of people in the city receiving free treatment at 500,000, or 25 per cent. of the population. Sixteen institutions kept a record of the number of persons treated and the number of treatments given each patient. These 16 institutions treated 93,806 persons and gave 246,140 treatments, an average of  $2\frac{2}{3}$  treatments for each person.

Under normal conditions the average per cent. of the population dependent on and receiving charities other than medical is  $\frac{1}{2}$  to 1 per cent. Let us say 10,000 and add 20,000 more to account for a reduplica-

tion, which would make 30,000. Deduct this from 500,000 and we have a remainder of 470,000, which shows the number receiving medical charity who are not compelled to ask for, or who do not receive, charity in other forms. This is an approximate estimate of the extent of medical charity abuse in the dispensaries.

Each of these patients received an average of  $2 \frac{2}{3}$  treatments, or 1,153,332 treatments for 470,000. Most of these treatments consist of something beyond the ordinary consultation, many resulting in expensive operations. We will estimate the average fee for the same service rendered in private practice at \$2 each, or \$2,306,664. Most of this burden is borne by the general practitioner. This \$2,306,664 represents the financial injury done the medical profession by this abuse in the dispensaries, but the moral injury done the beneficiaries of this misguided benevolence is past comprehension.

The accuracy of the matter contained in this report is vouched for by the Bureau of Charities and the committee. The above enumeration makes no account of the considerable amount of charitable work done by every physician in his private practice, which, estimated in dollars and cents, amounts to a large sum annually. In order to get an idea of the amount of charity work done by the profession in their private practice, I asked the opinion of a number of our representative practitioners. Their replies showed a variance between \$375 and \$1,000, the majority believing \$500 to be a fair average at minimum charges for operations, home and office treatments for each physician. In order that there can be no question of the conservativeness of this statement, I will place the average at \$400 for each practitioner. There being upwards of 3,000 in Chicago, this represents a total in excess of \$1,200,000 for this form of medical charity.

All that has just been said about dispensary abuse of medical charity might with equal, if not more, earnestness be applied to hospital abuse of medical charity, because their patrons are as a class of a considerably higher grade financially. The Committee on Contract Practice of the Chicago Medical Society for the years 1907 and 1908 submitted a report, which, summarized, is as follows:

Over 25 per cent. of the hospitals of the city, and among this number most of the larger institutions, are engaged in contract work of a more or less objectionable character. The phase that almost every one is familiar with is, that assignment cases are treated *gratis* by the attending staff, and that persons who are able to pay avail themselves of this practice to obtain medical attendance for nothing. And not only is this true of individual patients, but railroads, industrial corporations, societies and lodges get these same privileges on a large scale, and even in the cases where the employes or members pay into a fund for the assurance of medical and surgical care. The hospital generally receives full pay: the staff, however, gets nothing. This arrangement is neither equitable to the staff nor to the profession at large.

Few physicians have any adequate idea of the enormous amount of gratuitous work done in this city every year by our profession in treat-

ing hospital patients who are able to pay for the medical attention, but who under our present system are not required to do so. Will you allow me to present a few details on the subject taken principally from hospital reports and, therefore, assumed to be reasonably correct? There are 73 hospitals in this city for the care of the injured and ailing. Some of them are private and do no charity work other than accepting the gratuitous service of the physician; others furnish both free and paid service, while the remainder are devoted entirely to the care of the poor. The records show that upwards of 100,000 persons were treated in hospitals in Chicago last year (1907), and that of this number upwards of 60,000 were ward or charity patients, all of whom received free medical and surgical treatments, and the physicians received no remuneration whatever. Deducting  $\frac{1}{2}$  to 1 per cent., as it has been officially shown is the percentage of the population accepting charity other than medical, we have practically 60,000 people receiving free medical treatment in hospitals each year who are not entitled to it.

Allowing that 50 per cent., or 30,000, were surgical and 30,000 medical, and allowing, too, that a large percentage of the surgical operations were capital operations, such as laparotomies, amputations, dislocations, fractures, trephining, etc., and that a conservative average fee for the surgical work would not be less than \$50 for each case and \$25 each for the medical attendance, we have \$1,500,000 for the surgical and \$750,000 for the medical attendance, a total of \$2,250,000 per year given by the profession gratuitously to hospital patients alone.

We are asked to perform this enormous amount of labor for nothing, that is, for direct compensation in the way of fees and salaries, aside from the satisfaction of relieving pain and saving life. While these are valuable considerations, I submit they do not justify unlimited neglect or defiance of the ordinary economic laws that obtain in all other occupations. I believe that the laborer is worthy of his hire, even though he be a physician. I believe that a doctor should receive a reasonable compensation for taking care of those able to pay for his services, wherever they may be rendered. I believe that the principle of treating free the medium and well-to-do people is wrong, and that the practice is worse, and that all patients in private rooms and private ward beds should be expected to pay the surgeons or physician's fee.

Why, should not the attending physicians and surgeons be paid a fee for their attendance upon these patients, where no one can deny for a moment that the professional services are by far the most important and valuable asset these patients receive from the hospital, and yet they pay absolutely nothing for it? In fact, the professional services is their principal object in going to a hospital. If these patients are able and willing to pay their doctor for his services, as doubtless many of them are, what good reason can be given for their not doing so? The injustice of the custom is well illustrated in one of my own cases. Some years ago one of my patients, a civil engineer in excellent circumstances, had made arrangements with me to go to a hospital, take a private room and have an operation performed, the fee of which was to be \$200. Some



weeks later I learned through a mutual friend that the patient had gone to St. Joseph's Hospital, had taken a ward bed and been operated on by the late Dr. Senn, paying nothing for the operation. His total hospital expense was less than \$25. I have had a similar experience a great number of times during my career as a practitioner. It goes to show that the public understand the matter and are not slow to take advantage of it. I do not believe there is a physician within hearing of my voice who has not had similar experiences. Practice of this sort makes the hospital a rival with the outside physicians and a means of depriving them of their patients. Needless to say the outside physician loses a patient for all time through the medium of a semi-charitable institution. The man so wronged looks upon this institution as his professional enemy; its standing in the eyes of the medical fraternity is injured, and if this occurs often the institution may really become a source of discord and professional ill-will. The staff members helping in this transfer method do not receive an unalloyed blessing.

As a rule, sending patients to such institutions is tantamount to losing their patronage, for nine cases out of ten if the physician who refers the patient is not a member of the hospital staff and often if he is his connection with the case ceases when it enters the institution. Therefore, hospitals at the present time are not fulfilling their most complete function to the profession, the reason being enactments of rules which confer special advantages on a few medical men and rigorously deny any privileges to those outside the charmed circle.

At present where one finds a hospital there also one will find a small clique of medical men enjoying special advantages and privileges by virtue of their hospital connection. Their less fortunate colleagues being denied these advantages are thus proportionately handicapped in the practice of their profession.

Usually a hospital staff is comprised of honorable and capable men who would scorn to purloin their colleagues' patients, but there are psychological factors involved in the treatment of a patient in a hospital by a physician or surgeon enjoying the prestige of official appointment, and any patient who passes successfully through the ordeal of a surgical operation or serious illness is pretty apt to focus his gratitude, regard and confidence on the medical man who attended him. This is natural and involves no wrong, but when the attending physician or surgeon is an active competitor of the colleague who sent the patient to the hospital, to have the patient forsake the old for the new, not only creates a difficult ethical situation, but works a hardship upon the original physician. Had the latter had the same opportunity, in all probability he would have equally proven his skill and worthiness.

Such a system, therefore, tends to elevate the few at the expense of the many, whereas the ideal professional situation in any locality is a community of interest, with "equal rights for all and special privileges to none." The practice of medicine is not a soulless scramble for wealth and power, but a vocation for earnest men who must constantly and un-



flaggingly seek the highest possible efficiency in order to do the greatest possible good.

The hospital system that sooner or later must be adopted is that which offers to every medical man the opportunity of placing his patients in any hospital he or they may elect, there to treat them with all the freedom that is his as a legally qualified practitioner of medicine. Giving equal hospital privileges to every physician and surgeon can not fail to work for the general elevation of all. Hospitals will then become in reality what they were originally intended to be, institutions solely for the use and welfare of the public, and not institutions for the promotion of private gain, professional or otherwise, as under present conditions is too often the case.

Lodge practice is a branch of contract practice which furnishes medical attendance to members through an organization. Such organizations often procure and supply medical service to its members, in some instances to the whole family of which the head is a member, at such ridiculously low fees that the cheap medical service itself becomes a drawing card or an inducement for men to join these organizations. Many of them are at the same time beneficial organizations, paying weekly sick benefits to its members.

You who are conversant with conditions in the old world are aware of the fact that this so-called club or lodge practice has assumed proportions where it is a veritable curse to the profession; that royalty itself pays its paltry club fee for no other purpose than to receive free medical treatment. In Germany we find this form of practice assuming enormous proportions. We have been told, for instance, that the profession in many parts of the Austrian, German and British empires had, during late years, suffered severely from this evil. To such extremes had it grown in some of these countries that it became necessary to organize an entirely new feature in the profession, a league that in German-speaking parts of the Continent took the name of the "*Leipsiger Verband*." This league was pushed vigorously and its methods were so perfect as to enable it to stem the tide wherever found flowing too swiftly.

In England mill operatives, otherwise such sticklers for labor unions, good pay, short hours, and many holidays, had thoroughly demoralized our profession in many of their manufacturing centers. It became necessary for the physicians to organize in sheer defense of their means of existence. In that peculiarly quiet, stolid way they went ahead, and with bull-dog tenacity successfully met the issue. The fees paid by these fraternal organizations average about \$1 per annum, which entitles them and the members of their families to free treatment, the latter not to include primary venereal diseases and cases of obstetrics.

Many of these members belong to labor unions, and by organized efforts exact every dollar of their employer they can, and again by having membership in some fraternal organization try to evade payment of a reasonable fee for medical services. Individuals who by organized effort are willing to exact again by virtue of having membership in some fraternal clubs are anxious to evade a payment of an honest debt, show

by their conduct and inconsistent life that they are willing to receive what they are not willing to give.

The conditions to-day, as they appear to me, are as follows: On one side is a body of professional men wanting a just and equitable compensation for services which long study and self-sacrificing work fit it to render. Opposed to this we find groups of selfish men organized into bodies having such grandiloquent titles as "courts," "circles," etc., and planned to obtain our services for such inadequate compensation that the very offering of it is an insult to us. Only too often are these services in this fashion obtained by actually well-to-do individuals. Think, if you can, of a medical man accepting 2 cents per capita per week, a sum insufficient to pay for the "shine" on one of his shoes.

These organizations are cooperative. If one man does not work and have the proper pay, the others will not, either. I approve of this, so far as it goes; but every one is making an effort to rob the poor doctor of the honest income he so much needs. I am not objecting to cooperative plan to pay the doctor's fees, provided they are the regular fees. When, however, you are having the work done for the sum of 2 or 3 cents apiece a week, to make the organization cooperative, they should make an offer to the butcher, the undertaker, the blacksmith, who are just as worthy to have the support of the organization as has the poor doctor.

The effect of the nominal fees paid for lodge practice is apt to create the impression that those outside the lodge are paying too much for medical service, when, in truth, to obtain a medical education and maintain an honorable position in the profession requires more money, more time and labor than in times past. The intelligent study and treatment of disease requires a physician to be much better equipped by way of laboratory apparatus, instruments of precision and very many things now needed to practice medicine intelligently. The support of a family and necessities of life cost more every passing year; hence, fees must be increased and not decreased.

The present wages of the laborer and the mechanic, the salaries of those in office, the gigantic incomes of the manufacturer and merchant and the general prosperity of the country at large are unprecedented, and yet the fees of the average practitioner have not advanced an iota in many localities in the last twenty years. Good fees means good physicians and to pauperize the profession means to reinstate the unlearned and incompetent. The physicians usually engaged in large practice may be divided in two classes. To the first group belong young men just starting out and who accept such positions simply as a tide-over and then resign after being able to get along fairly well. To the second belong men of all ages who have failed to establish a well-paying practice.

It often happens that the young graduate starts out with such financial resources that he can not afford to wait until he establishes a private practice. He very early learns that there are in this section hundreds of lodges and sick benevolent societies employing physicians on contract practice, each of which insures an income for the physician of from \$25

to \$100 quarterly. It is, therefore, natural that a young physician should, under the circumstances, make an effort to obtain such employment. This is more especially so when he finds that physicians with from ten to twenty years of practice are seeking the same position. It often happens that at the lodge elections we find old physicians competing against one another as well as against younger men, as they are all anxious to be elected usually each in turn will make some concession to the lodge or society to gain votes.

The question is, Is this kind of contract practice just and right or is it unjust and wrong? Some physicians engaged in lodge practice admit it is wrong, but try to excuse themselves by saying that if they will not do it others will, but two wrongs do not make one right, and hence this is no excuse at all; they admit it is wrong and manifest a willingness to do the wrong as well as the other fellow. What is right for one physician to do is right for all to do. Imagine all physicians engaging in lodge practice.

There is another and most important phase of the subject. That is when engaged in lodge practice you have to sacrifice your natural pride and personal feeling every day of your life to the selfishness and caprice of the people, for your patients will make a footstool of you and use you as a messenger boy just simply because they know you will not cost them extra.

These lodge physicians are not practicing among a clientele who come to them out of choice, but because they are cheap. I fail to see how any physician with any sense of dignity can for a paltry sum and under the cloak of some fraternal organization enter any threshold where he is not the physician of choice. The results of this condition of affairs are that the physicians become disrespected, the tone of the profession is lowered, the remuneration for medical services become ridiculously small, physicians are compelled to accept impossible conditions, and they are forced to care for a large number of families whom they can not properly attend.

Are you aware of the proportions to which this evil has grown in this country? You may when I tell you that in one particular organization there are practically 250,000 members; about 50 per cent. of this number are men who have families, and, as each family averages about five to each household, you can make your own estimate as to the number who receive medical aid for the small sum of \$2 per year, which is the paltry amount stipulated in the by-laws of these orders.

According to the best information available at the present time, there are operating in the city of Chicago about a dozen organizations doing contract practice of a more or less objectionable nature. The membership of which could be conservatively estimated at one person in every 40 of this city's inhabitants, or a total of 50,000 people, and representing a money loss to the profession of about \$500,000 each year, which sum includes the treatment rendered the families of the members.

All that has been said relative to lodge practice might with equal force be said of contract practice *per se*. The only difference is that in

contract practice proper we are dealing with corporations instead of lodges or societies. Many of our large firms and corporations have contracts with hospitals, the latter agreeing to render free medical and surgical service to injured employes, the corporations merely paying for the bed by the year, thus securing unlimited service for a purely nominal amount. One large manufacturing establishment in this city has connected with it a dispensary and some fifty beds.

Another method adopted by corporations is to place professional services on the block and knock it down to the lowest bidder. Physicians living in localities where this practice flourishes know how greatly it harms the public as well as the profession; it places the practice of medicine on purely a commercial basis; it prevents the physician from obtaining proper remuneration for his services; it places a blight on medical progress; worst of all, it reduces the profession to that of a poorly paid promoter.

While the right kind of competition among medical men is healthy, that is, competition in which one physician endeavors to rival his colleague in knowledge, skill and conscientious effort, on the other hand, the form of competition which is directed towards lowering the prices of professional dignity and of medical efficiency is detrimental to the moral, economic and professional welfare of the physician. This sort of competition has already proven a complete failure from every point of view.

There are some forms of contract practice that are legitimate and result in the mutual protection of the physician and patient, such as physician or surgeon to a construction gang or to certain mining districts far away from physicians, but remunerations should be commensurate for the services rendered. A reasonable fee should be paid for the service rendered, whether it be rendered to an individual or corporation. The physician's fee should not be determined by the whim or fancy of any individual or corporation, but as provided for in Article 6, Section 3, of the "Principles of Ethics," by the physicians of said community. The extent of this form of contract practice is enormous and it includes services rendered manufacturing companies, railroads and transportation companies of all kinds, and nearly every industry where men are employed in any considerable numbers.

In the short space of time allowed for the compilation of this paper I found it impossible to present you with detailed statistics bearing on the subject of contract practice. In arriving at approximate figures I consulted men occupying positions which entitled them to speak authoritatively; we estimated the number of individuals in this city each year deriving benefit from this form of practice at 150,000 men and that the services rendered at minimum physician's fees represents a money loss to the profession of at least \$750,000 per year.

It will be seen from the figures that I have quoted you this evening that \$7,006,664 represents the total sum annually given in the way of medical charity by a little band of practically 3,000 physicians. The Chicago Bureau of Charities is authority for the statement that the total



amount of charity expended in this city per year is \$2,500,000. This includes the amount expended by city, county and private organizations of every name and nature. Think of the contrast. A band of 3,000 physicians giving practically three times as much to charity each year as the total population of a city of over 2,000,000 people. Scores of the inhabitants are reckoned as multimillionaires, many of whom enjoy wide reputations as philanthropists.

I have tried to present the subject as it exists in Chicago to-day, and I have attempted to argue and prove to you that medical charity as it exists at the present time is unjust and wrong. I share the opinion of many other physicians, that it is high time for medical men to unite and by concerted action to introduce certain necessary and important reforms, and unless the matter is brought clearly before them and full publicity given nothing will be done. The medical profession does not want to be accused of forming a trust. It would be most undignified if our organization would attempt by organized effort to exact certain fixed fees as is now done by many artists, but it is our moral duty to attempt a more complete organization and by more organized effort protect ourselves from all forms of imposition and injustice that would lower the dignity and ultimately cause its financial and professional ruin.

The question is, How can we put an end to medical charities? The first thing to do is to attempt to effect as complete an organization of our profession as possible, and physicians, like people in lower walks of life, must be educated and those who can not be educated must be disciplined.

Article 6, Section 1, of the Principles of Ethics of the American Medical Association reads as follows: "By the members of no profession are eleemosynary services more liberally dispensed than by the medical, but justice requires that some limits should be placed to their performance. Poverty, mutual professional obligations and certain of the public duties named in Sections 1 and 2 of Chapter 3 should always be recognized as presenting valid claims for gratuitous services, but neither institutions endowed by the public nor by the rich or by societies for mutual benefit, for life insurance, or for analogous purposes, nor any profession or occupation can be admitted to possess such privilege."

Article 6, Section 3: "Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients, and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit."

The spirit of the letter of the preceding sections of the Principles of Ethics of the American Medical Association would forbid any physician to accept the appointment as physician for any corporation, firm, hospital or dispensary, lodge or society wilfully aiding or abetting in any of the abuses heretofore mentioned.

A reasonable fee for medical services, rendered to those able to pay, is not only our moral desert, but is imperative if the progress in medicine is to continue and the welfare of the laity is to be preserved. The



disgraceful nominal fee usually received for contract practice pauperizes the profession and in proportion to its extent lowers the dignity and lessens the usefulness of the medical profession. Such practice contravenes the principles of justice and equity which should be religiously upheld and made the basis of all our professional conduct toward our fellow-physicians and toward the laity. The question of the abuse of medical charity will not be settled permanently until it is settled on a basis of justice, and Emerson says that "justice is the fairest thing all around."

The criticism may be made that this paper is too commercial. In reply the writer would remind his hearers that the time may come in the lives of any of us when an honest dollar will be the best friend we can have. Too many physicians in the past have been defrauded of their just deserts by this promiseous and unlimited medical charity, and, as the custom seems to be on the increase, it would seem time to sound a note of warning, even at the risk of being thought too mercenary.

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## THE CHARITABLE CARPENTRY MOVEMENT OF OGACIHC.\*

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CHICAGO.

Being an allegorical study of the rise, progress, present status, and significance of the institutional system of free medical treatment now in vogue in our largest cities, and with the presentation of a comprehensive method for controlling its evils.

About the year 1860 the government of Ogacihc, being short of funds (for the funds were extravagantly wasted in the interest of favored politicians), nevertheless set about to relieve the distress of certain of its citizens. Statements and resulting investigations had shown that in certain houses owned by poor persons the roofs leaked, and that the householders were too poor to make repairs. Winter was coming on and the need of relief was becoming very grave. So the government (chiefly in order to avoid calling attention to its own financial deficiencies) asked for volunteer carpenters to work during evenings or at chance leisure times to mend these roofs. The government would furnish a part of the crude lumber required, the householder might furnish a part, and the carpenter could utilize his own tools. He would sacrifice only his leisure time to the work. Not realizing the direful, far-reaching consequences of such a plan, a host of generous-hearted mechanics responded. The work was quickly done in a short period of leisure each week by the volunteer carpenters. But new holes kept appearing in the roofs of other poor men, and so the service was continued until it became

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\*Read before the West Side Branch of the Chicago Medical Society; before the South Side Branch, and before the Scandinavian-American Medical Society of Chicago. "Ogacihc" is the inverted spelling of Chicago.

a fixed form of charity. After a few years these charity carpenters became well known as especially skilled in roof-making and mending, and were enabled to command more work and a higher wage than their fellows. They had become specialists. The trade was overcrowded, wages low, and leisure abundant. So, as other carpenters, themselves scratching hard to make a living, saw the favorable economic result to those engaged in the charity work, they, too, offered their services for the repairing, without charge, of poor men's roofs. In order to encourage and expedite this beneficent labor, the government established a central dispensary. To this the poor came to apply for free work upon their roofs, and there also the volunteer carpenters found a shop fitted up in which they could shape the lumber for various repair jobs.

In the course of a few years public conception of the purpose of this charity had begun to broaden. Early in its history no one had thought of applying for aid, excepting in case of actual acute poverty, and real danger of suffering from cold and wet. But it became gradually evident to the citizens that this conception of the service did not meet the purposes of the charity carpenters. Their incentive to enter the work lay in the expectation of increased efficiency through increased experience, and in the advertising which institutional positions gave them. And all could not find private work as roof repairers. So they unmistakably evinced their desire to obtain any manner of job in carpentry. Thus the limitation of free carpentry to roof-mending disappeared.

Moreover, so bent were the charity carpenters upon pushing themselves to high reputation in the trade that they came eagerly to accept free work almost regardless of the economic means of the applicant. What they did "charity" work for was experience and advertising, and nothing but a firm wall of exclusion could prevent their getting a full measure of their desires. And the public soon realized this. So *economy* rather than poverty, *convenience* rather than necessity became the moving incentives for requesting free work. While really important and necessary jobs still came, yet every manner of carpentry ill, both urgent and not urgent, both for necessity and for convenience, both simple and elaborate, both required by those in need of charity and by the comfortable or even well-to-do, were undertaken by the thousands of jobs. Small repairs in roofs were made, doors were hinged, floors were laid, sometimes with expensive hard woods, attractive mantles constructed, woodsheds built, and even whole additions to houses fashioned. The charity carpenters were, indeed, determined to have experience and advertising.

For many years preceding these events two or three schools for the study of carpentry had existed in the city. Heretofore they had found experience for their students by setting them to work upon jobs that had no practical purpose, and by utilizing them as assistants in profitable projects. Early in the course of this movement, however, one of these schools established a dispensary for carpentry upon the lines already employed by the government. People came with their applications for carpentry work, and the students under the guidance of instructors were sent to diagnose the household disorders and to assist in their repair.

The work in all dispensaries was carried on by classifying the service. This was found to be economical of time, more efficient in the results and more pleasing to the charity workers. For each carpenter became so skilful in his especial branch of service that he could do his work more quickly, more effectively and with less effort, and, besides, it helped him to get the higher specialist's fees in his private work. With the leap into success of the first school to adopt dispensary carpentry methods the others followed suit, so that in Ogachi there were after a time three carpentry schools, each with its own free dispensary. The teachers of highest rank, the professors, exercised supervision over their respective departments and did a chosen part of the teaching work. Usually they gave but little time to the schools and came in touch with the free service no more than to use jobs as illustrations in their lectures, and perhaps to handle the very difficult or rare ones. Those highest in rank usually found the most profitable occupation in private work, as employers of other carpenters upon large jobs, or as high salaried directors of important projects. The lesser instructors did the commoner part of the teaching and labored on the free jobs, thus gaining in experience and catching some of the reflected glory of those higher in rank. They took the less desirable pay jobs and made a more or less precarious living by grasping nervously at each bit of work which lay along their paths. Every subordinate in teaching rank hoped that by perseverance and application and full disregard of well-known sensible laws of economics they, too, might eventually climb over their fellows to the great heights already attained by certain successful professors in the trade.

By this time the general work of carpentry was in a serious plight. Every one realized this, but no one could explain its reasons. It was much more common to be out of pay jobs than to be employed, and yet the dispensaries were always noticeably crowded, and by reason of the resulting desperate struggle for existence wages were taking a steep downward course. But one fact stood out very boldly, the professorial specialists were being heralded as great leaders in the trade, and were in many instances waxing rich. The thing to do for the ambitious carpenter who found the making of a living next to impossible seemed to be to go into dispensary work. Thus he would become skilful in a specialty and would place himself in line for those great professorial rewards. And this they largely did, sometimes immediately upon leaving their trade school, and sometimes after they had struggled on unsuccessfully through a small or large part of their working lives. But after a time the positions in the schools had become filled; and, even if entrance into them were possible, the high-ranking positions, that is, those having a high advertising value, were already occupied by others. It was much more practical, forceful and business-like to at once start a new school in which one could promptly make himself a professor. Why should those already in the schools have the exclusive advantage of this specialty-creating, this quasi charitable scheme of self-exploitation? What was fair for the goose was fair for the gander. So it seemed to those carpenters out in the cold, and so it seems to the wri-

ter. And thus these self-created professors of carpentry were manufactured with lightning rapidity, and so abundantly that one-third or more of the members of the trade were in some way engaged in free work. The title "professor" ceased to indicate the attainment of exceptional capability.

The numerous new schools which came into being had to have, of course, a dispensary and a full patronage of free jobs. Now the intensest competition for free carpentry work came into being. What, with the great government institutions (for positions in which many of the leading carpenters took civil service examinations and groveled before politicians), with the three older carpentry schools each having a large dispensary, and with the dozen or more new schools each demanding its full quota of teaching "material," and with numerous carpenter-exploiting non-educational institutions, the demand for free carpentry service, although already expanded outrageously, was now never nearly satisfied.

Thus there existed a struggling horde of underworked, underpaid and underlived general carpenters, who, besides, were in large part but half-skilled because half-experienced. While one did occasionally discover a really successful general carpenter, now and then even with a very large income, yet most of them were ever struggling for a meager and strained existence. And, on the other hand, there was a large but smaller horde of specialists, of all degrees of capability and experience; of these a very few were becoming rich; a certain small number were really successful; some were making such a living as an ordinary skilled workman could make in any trade, but the great majority, like most of the general carpenters, were groveling for an insufficient existence.

And that portion of the public which obtained a part or the whole of its carpentry repairing free (including people of all degrees of economic comfort and poverty, from the penniless beggar to the man who owned apartment buildings), now numbered one-fourth to one-half the population. Long since hundreds of thousands of people had ceased to reckon carpentry repairing as an expense which needed to be provided for; consequently they never were prepared to pay for carpentry work. To be asked to do so was a cruel and positive hardship which they could not of right be compelled to undergo. The grocer, the clothier, the furniture dealer, the saloon-keeper, and the theatrical entertainer each received a slightly larger amount than when people paid for their carpentry work. In general the money saved from carpentry drifted away without realization as to where or for what it had been expended. Free carpentry had become a part of the economic plan of Ogacihc, and all economic thought among men, employers as well as employes, took cognizance of the fact that carpentry repairing did not have to be reckoned in economic calculations.

Instances were not uncommon, of course, where free carpentry had been a great boon to a household. Sickness and death had been averted, and men temporarily depressed in circumstances had been enabled to climb up more directly, strongly and hopefully. Nothing was more cer-



tain than that free carpentry properly regulated was capable of being vastly useful, and that, too, without doing injury.

Nevertheless investigations showed that, on the whole, those who were in the habit of asking for free carpentry were poorer than formerly and suffered more. The reason was that their standards of thrift, of manliness, of independence, had been lowered. They were less determinedly and certainly ready for the inevitable pay day. The wolf was more than ever howling about their homes. Some of them carried this newly-acquired disposition for getting a service having economic value free to almost criminal lengths. With their minds thrown into economic confusion and into habits of deception by the free carpentry movement, they said, "Does not the generous carpenter give his services free? Then why should not the physician and the clothier? Why should other trades not be as considerate of our struggling?" Or, "Do we not fool the carpenter into working for us without charge? Then why not fool the grocer and clothier?" So these householders ran up bills and "skipped" payment; they came to paying time without means and begged to be excused; anything to avoid coming up to the scratch of manliness and thrift. And occasionally, thus gradually led on step by step, some of these householders dropped into the ranks of the real paupers, those whose manhood had been wholly swallowed up under the devilish conditions of society, of which indiscriminate free carpentry was one.

Step by step a changed conception of the economic service of carpentry had crept into the minds of the carpenters themselves. Formerly carpentry had meant to them a valuable economic service to be paid for as such, and as other services were paid for. In circumstances of need the members of the trade had been called upon and had gladly worked without compensation. Now this almost unlimited amount of free work, although, to be sure, unfortunate for the carpenter and doubtless presenting many abuses, appeared, on the whole, to be necessary and even natural and quite as a matter of course. Other classes of workers, the grocers, the clothiers, the physicians, the bricklayers, the clergymen, were all, to be sure, paid for their services, but were they not relatively harsh and inhuman? The carpenter chose to live upon a more ideal plane than such men. This vast system of indiscriminate charitable carpentry was necessary to the world's welfare, and the carpenter should manfully bear that burden. Such was the altered conception of the economic work of carpentry.

Moreover, there was the great usefulness of this charity to carpentry education. Some argued (especially those who were getting rich through the advertising which high positions in the carpentry schools gave them) that practically an unlimited amount of free "material" must be at hand for carpentry education. How vast was the usefulness of carpentry and how necessary that carpentry scholars should have full practical opportunities for experience in all phases of carpenter work. In order to bring the rarer job in in sufficient numbers it was necessary to have under control thousands upon thousands of ordinary jobs, whether these were needed for carpentry education or not. Such was the argument.



But since there were three or four times as many schools as were needed for carpentry education, and since new ones, as well as new non-educational institutions, were (for the purpose of self-exploitation) being every now and then created, and since, as a matter of course, each new school, in order to compete, worked for a full amount of free material, the outlook for pay carpentry in the city seemed bad, indeed.

Yet with all this boastful, hypocritical and ridiculous self-laudation the carpenters were anything but satisfied with their eharity system. They then saw dimly what they came eventually to see clearly, that, in large part, the subordinate special carpenters were right along doing institutional jobs free which would of right serve them most needfully in private work. They were dimly realizing, what they came to realize clearly later, that a group of carpenters did not scruple a whit to enter a neighborhood with a school and, for purposes of their own exploitation, proceed to rob the local carpenters of their pay work. The institutional carpenters were also beginning to see, what they saw clearly later, that while the free system was an almost ideal exploiting medium for the professors it was a wily snare for the subordinate teachers and the general trade of carpentry. Those whose work lay among the well-to-do and rich were almost the only ones who benefited, for their clientele was little disturbed by the free system. So the lesser teachers worked systematically to destroy their own constituency, thus enabling the professors to build great reputations that would allow them to exploit with high charges their wealthier clientele. Of course, the lesser instructors hoped that they, too, would become professors and be employed almost altogether by the well-to-do classes, and thus be able to command high fees and to trample upon the rank and file of the trade. But this hope was largely unfounded, since the work for the wealthier people would always necessarily be done by a relatively small number of carpenters and since, also, the subordinate teachers must always outnumber the professors five or ten to one. At any rate there grew up a deep feeling of discontent with the system.

Through this unrest arose a voluminous literature published in the carpentry journals. On the one hand, it was argued that criticism was captious and unfounded, that carpentry education must have "material" and it ought even to be larger rather than smaller. Others felt that the movement was some how or other a huge blunder, or involved such a blunder. No one saw far into the difficulty. The thing to do was to lessen the "abuses," that is the doing of work for the economically capable; but schools existed which still lacked sufficient "material"; this called for an extension, not a curtailment of the system; in general to lessen the free service was to strike a blow at carpentry education. A curious mistake in all this discussion was the almost universal disposition to blame some indefinite, some institutional agency outside the carpenters, for thrusting this evil upon the long-suffering trade, instead of blaming the carpenters themselves.

A member of the trade who was in the free work in some obscure capacity, believing that his difficulties in getting on were due in large

part to the charity system, set out seriously to understand it. After some years of study he published a book, which for the first time disclosed the real meaning of the movement. He pointed out (1) the appalling prevalence of real poverty in the city. While the newspapers and politicians and superficial observers cried "prosperity," thousands upon thousands were ever on the verge of dependence or had passed beyond. He advised each carpenter to become an independent student of economics. Being grounded in knowledge, he would be less swayed by the superficial politico-economics of the day and would be better able to throw his influence in the right direction for the eradication of the real underlying causes of poverty.

He said (2) the carpenters greatly deceived themselves in looking upon this vast anomalous system of free work as carried on chiefly either for purposes of charity or for purposes of carpentry education. Its driving motive was self-exploitation on the part of the institutional carpenters themselves. Charity and carpentry education were little more than excuses upon which a system of trade exploitation had been built. The proof of this assertion lay in the fact that the free carpentry system paid no attention whatsoever to the limitations of the needs either of charity or of carpentry education, and also in the eagerness with which the carpenters sought institutional positions and entered into the free work.

Why the carpenters had drifted into this particular means of self-exploitation was explained chiefly by these considerations: first, carpenters were ordinarily ill prepared to undertake the work they were called upon to do, which made them zealous in gaining new experience; second, they sought to gain the much-prized advantages in practice of becoming specialists, and, third, the ethical rule of long standing in the trade denying the right of carpenters to advertise directly by newspaper, circular or similar methods, forcibly drove them to indirect methods of advertising. In order to live they must make their existence and merits known somehow or other; only in that way could they get jobs. So the "charity" system, he said, was an attempt on the part of carpenters to gain experience, thus adding to their earning power, and to advertise while keeping within the ethical rules of the trade.

He said (3) the charitable carpentry system was a venture in economics, and must rise or fall upon its ability to stand economic tests. Instead of leaving the work of carpentry to the ordinary laws of competitive trade, it diverted a vast proportion of this work into free channels. Its proposition was, broadly speaking, that carpenters should receive compensation for carpentry work only from those who chose to pay; but those who chose to pay were getting less and less in numbers. There was to be no diminution in the amount of carpentry work done, but there was to be curtailment in the number who paid. Either the income of carpenters by such a plan must be enormously reduced, or else those who did pay must pay more. But it was impossible not only to get more compensation, but under the great stress for work it was impossible even to get so much per person as formerly from those who paid, and, besides, the number who paid was lessening; therefore, the income

of carpenters must greatly fall. And since every trade or class of occupation was, as a whole, living close to a bare sustenance, the carpentry trade included, any large diversion of economic return from one trade to the others was in the last analysis impossible without the practical impoverishment of large numbers of workers, and this was deeply unjust, and, therefore, deeply immoral.

He said (4), as a self-exploiting scheme it was impossible, because no plan of self-exploitation which necessarily reduced the total income was rational. Individuals might find the scheme profitable, but this must necessarily be at the expense of the whole trade. Those who did gain by it gained by reason of their ability to debauch the clientele of other carpenters while maintaining their own nearly unaffected.

He declared (5) the system was intolerably injurious to the public, first, because it did not do what it pretended to, it did not care faithfully for those in real need; and, second, because it did much more than it pretended to, it debauched the character of many thousands of citizens. The system, feeling little responsibility to its free clients, did its work shamefully, and the common neglect of free applicants was as likely to fall upon those in real need, with consequent increase of suffering, as upon others. Who could tell, he said, the far-reaching effects of going deliberately to work to undermine on a vast scale the sense of economic independence of a people?

(6) He said: The system was a serious drawback to carpentry education, because it made a personal advertising scheme of what was really a deeper matter; its effect was to lower the ideals of carpentry education; this work was being done largely in poorly equipped institutions by self-exploiting carpenters, with but scant regard to ability or fitness; the system spread educational resources which ought to be concentrated and selected; it even made impossible what it most pretended to do, namely, to supply free carpentry "material" in abundance, for, owing to the ridiculous multiplication of schools, a large percentage of them still lacked in "material"; it was most wasteful of its carpentry jobs from the educational standpoint, fully one-half not being utilized at all for educational purposes; by reason of its playing with carpentry education it discouraged endowments from laymen; in general, trade education was the football of ambitious carpenters, who, with little interest in education as such, were endeavoring to kick the educational ball into exploiting their own private fortunes.

The system as conducted, so the author declared, was, as a whole, a scurrying on the part of drowning carpenters, who, in order to save their economic lives, grasped even at self-destroying supports, believing them to be life preservers. Its insanity was destruction to its insane upholders. Remedies capable of taming it into rationality must be sought and applied, and fortunately these were not difficult to find. The remedies must seek (1) to protect the carpentry trade against economic imposition; (2) to provide faithful service for really needy persons; (3) to discourage the debauchment of character and encourage the independence of spirit of all persons concerned; (4) to improve the methods of

carpentry education by concentrating effort, elevating standards and assuring educational "material."

The basal purpose of a remedy, he said, was to limit free service to persons in actual need of charity. The very human tendency to take advantage of free offerings, regardless of need, must be effectively combated. This was the foundation of all proper handling of the evils of the system. To this aim no one could fairly take exception. The problem was, then, to devise ways, first, to distinguish between persons who should and persons who should not have service free, and, second, to determine upon proper means to compel the limitation of the service to those decided to be in actual need.

The first part of the problem would necessitate a real investigation of the economic circumstances of every applicant, and that, too, by experts in such work. So a competent and fully accredited machinery of investigation must be established. This was to be undertaken wholly by lay workers, but with the oversight and sanction of the carpenters themselves. Having established such a bureau of investigation, it must become the invariable rule that no person should receive service in institutions free until passed upon by this accredited tribunal. The enforcement of this rule would constitute the second part of the problem.

It was one thing to make such a rule, the author declared, and quite another to have it executed. Could men who were showing such remarkable zeal and energy to perpetuate and extend the evils of the system all be relied upon to revise their methods voluntarily? Would general knowledge of human nature give ground for such a hope? The breaking of the rule in one place would be the excuse for its breaking in all places. Had not the confusing factor in all suggestions heretofore advanced proposing the limitation of free work been the lack of a means of making the application of the suggestion extend to all institutions and to all members of the trade? One school could easily enforce a rule among its own members, but would this be of more than slight effect upon such an extended evil? Nor would the enforcement of the rule among a dozen schools much more than lightly affect the problem. What was required was a means which would influence every carpenter to refuse free institutional work, excepting for those favorably passed upon by the accredited investigating tribunal. Thus would the evil be choked at its very source, and thus alone could it be successfully handled.

Let it be remembered, he continued, that already the carpenters were, by a self-imposed rule, restrained from direct advertising. As direct advertising worked injury to the public, so abuse of free service worked injury both to the public and to the trade. As the injury resulting from direct advertising was overcome by a rule of the carpenters, so ought the injury from the abuse of free service to be overcome by a similar rule. That rule should declare that any carpenter who did institutional work free for persons not favorably passed upon by the accredited investigating tribunal should be declared unethical and unworthy to associate with his fellows in the trade. The author's plan of handling the evil was, then, first, to see that every case was adequately investigated before



free service was granted, and, second, to curb the trade tendency to abuse free service for purposes of self-exploitation by declaring such abuse to be unethical.

The first effect of the adoption of this plan, he went on, would be to bring the schools and high-grade non-educational institutions fully into harmony with it. No carpentry school which was unethical could live a year. With growing scarcity of free "material," the disposition to build new schools would have an important setback. Some institutions already in existence would discontinue. Others would consolidate. Competition for free service would now increase among the remaining schools, but, the supply being limited, the competition would take the form, not of greater debauchment of the public and impoverishment of the trade, but of improved service to the free applicant, one of the most important needs of reform. Granting that the "material" required for carpentry education ought to come through the utilization of charity jobs, it was necessary at present only to economize those which were really legitimate. For, in view of the fact that 20 or 25 per cent.\* of the population of Ogacihc were verging dangerously close to actual misery and want (that is, 400,000 to 500,000 in a city of 2,000,000 people), there was no fear of lack of educational material, if only the number of schools could be kept reasonably within needed limits, and if the jobs were used economically. In other words, curb that form of trade exploitation which had led to the ridiculous multiplication of the schools and non-educational institutions, and material would, as a matter of course, become abundant, and that, too, without wholesale impoverishment of the trade. Moreover, it was to be devoutly hoped, he said, that the need for charitable carpentry work would eventually grow so small that carpentry education would be obliged to look elsewhere for its "material." Why had the educators never thought of utilizing (upon broad humanitarian grounds) the unlimited supply of service which was regularly paid for? Here was untold wealth of educational material. And if it was so necessary, he said, to have the much discussed and much exaggerated "rare job," then let carpentry education pay directly to get it, rather than impoverish a trade and debauch thousands of the population of the city to that one end. Eventually, if need be, the number of schools could be controlled by direct trade or government regulation. At any rate this wholesale impoverishment of carpenters ostensibly to feed carpentry education must forever cease, regardless of what became of the schools. Carpentry education must build its structure upon more sane and moral grounds than upon the pauperization of a people and the impoverishment of a trade.

Another of the immediate effects of the acceptance of this plan would be a falling off to the number of many thousands of those who heretofore have regularly sought free carpentry service. These would at once revert to the private work of carpenters. This number would under judicious encouragement greatly increase. But carpentry, although upon a saner and healthier basis, would, even then, have a burden

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\*Robert Hunter in "Poverty."



to bear which would cause the biblical 10 per cent. for charity to fade into significance; for it necessarily would be involved in free work for an enormous number of indigent persons, the outcome of immorality, weakness, accident, death, and a deficient general economic system. Since carpentry must in any case struggle under this necessary economic burden, what a stupendous folly it was to pile on twice as much unnecessary load.

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### PSYCHOTHERAPY.\*

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The wise and good of every age have speculated on the nature of the human mind. No man lives or ever did live who has not marveled at its phenomena. The most ignorant asks whence we came, and the most learned whither we are tending. The youngest child able to talk inquires where the baby was obtained, and the venerable sage declared that one of the questions past finding out was how the bones do grow in the womb of her who is with child. Infinity stretches out before us on every hand—infinity of magnitude, infinity of space, infinity of weight, infinity of personal identity and, last of all and greatest of all, infinity of thought and imagination, and around it all and through it all force acts upon matter, matter stores up and generates force, both unspent, both unincreased, both indestructible and both subject to the unchangeable laws of natural symmetry and order.

The evidence of the existence of the mind is also evidence of its phenomena as exhibited through the body. What the evidence of so-called spiritism is worth to those who claimed to have perceived such evidence I do not know, but for the purpose of scientific investigation it is useless. Heretofore we were taught that all phenomena of Nature occurring outside the movements of men were legitimate objects for investigation by men of science. It was considered not only their privilege, but a duty as well to discover, if possible, the laws that governed them, but those phenomena operating directly within the realm of mankind, those forces that affect the movements of individuals or a people were considered too sacred to be questioned, too holy to be investigated. And so we find that until comparatively recent years no inquiry was ever made in the light of science concerning the phenomena of the human mind. But under the broadening influence of science, the mind has expanded until it has become worthy of study. Those psychologic phenomena that once awed the savage and filled a younger world with fear are now the objects of most painstaking inquiry at the hands of scientific men, and the fact has been established that they no longer belong to the miraculous realm, but are the direct result of a law in Nature not yet understood, but nevertheless as natural and immutable as that of gravitation.

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\* Read before the Saline County Medical Society.

The magicians, seers and soothsayers of a barbarous world and the witches of our colonial days have given place to the suggestive therapist, the hypnotist and the Christian Scientist of a more enlightened age. That is to say, excepting the last named, that psychologic phenomena is being stripped of all superstition and placed side by side with other wonders in Nature's treasure-house. In view of the limitations of the mind to comprehend its own phenomena, we must content ourselves with the facts as they are developed and learn to apply the truths as we are able to grasp them. One truth established by science and the one that interests us at this time is the fact that the mind has the power to favorably influence disease, and it is upon this phase of psychology that I am to address you to-day.

The mental and physical mechanism of man is such that no action occurs without a preceding thought. The mind must think before the muscles can act. This holds good not only in those actions that are directly under the control of the will, but also in all involuntary actions which are themselves directed by subconscious thought. Even the movements of the death struggle are but evidence of an incoherent message from the subconscious mind.

Actions have much to do not only in determining the moral status of an individual, but they have a bearing equally great upon his physical well-being. As a man thinks so he acts, and if he thinks his happiness and that of his family depends upon his keeping pace with these strenuous times, this later-day hustle and bustle, he too often finds his strength taxed to the utmost, and the ruddy glow of health that once bedecked his cheeks gives way to an ashen hue; his eyes lose their luster: his muscles, once elastic, now functionate but sluggishly; his blood no longer surges through his veins, but merely moves along as if without motive, and he feels as tired at morning as he did on retiring the night before. But he must not stop; he can not spare the time, and so he pushes on until despondency puts her stamp upon his mind and he is sick. If a woman thinks her life almost depends upon her keeping up with the fashions, she will often find herself out at night with bare arms and neck exposed to an atmosphere that chills the skin and drives the blood within the inner vessels, unduly engorging the viscera: she will squeeze herself into a cast that displaces the pelvic and abdominal organs; she will keep her nerves in a constant tension through day and through night, entertaining and being entertained, and ere time puts a single wrinkle in her brow her physical strength gives way beneath the strain and she becomes a nervous wreck. And so I might go on to illustrate in a hundred different ways to prove that our physical well-being depends very largely upon our actions, and that actions are always preceded by thought.

Having concluded, therefore, that actions are prompted by thought, let us discover, if possible, the origin of thought. This fact will give us a clue to the understanding of how best to get control of those actions that result in ill health and at the same time broaden our conception of what psychotherapy is and what it is destined to accomplish. It must be admitted that no thought arises spontaneously in the human mind;

that is to say, the mind can not create even in imagination. If you see a white rose, you may easily think of all the different colors, or if you taste a luscious apple it is no trouble to think of many flavors, but you can not think of a color you never saw nor a taste you never experienced. Imagination can give to a man the head of a horse, a lion or an eagle; it can furnish him with wings, horns or a tail; it can give to him the instincts of a fish, a bird or even a butterfly hovering about the flowers; it can supply him with any form or habits possessed by any known beast or fowl or inanimate object, but it is utterly impossible to conceive of a being having neither parts nor passions. So, too, our wants are limited by the horizon of our experience. We can not desire that which is unknown to us. The man who has lived on a farm, who has never breathed any other than the atmosphere of a country life and who has never been permitted to read the papers nor talk with the experience, would have no wish or desire to take a ride on a trolley car or listen with impatience to the phonograph each evening after the sun went down. If the mind can create, it can also annihilate; the one is no more mystifying or difficult to perform than the other, and annihilation is something we all agree can not be accomplished by any force, great or small.

What, then, is the source of thought? Is it a child of the brain or does it spring from that mysterious realm called the mind? Is it a gift divinely sent or it is a result of the association of other phenomena in Nature, such as is demonstrated in the growing grass and blooming flowers? Right here I wish to say that upon this question there is little known; much that is unknown but about which speculation has woven many an intricate web. When Galileo saw the chandelier swinging to and fro, it gave a thought to his mind that later produced the pendulum. When James Watt saw the steam lifting the lid of the teakettle, there was born in his mind a thought that in after years gave the steam engine to the world. As with Galileo and Watt, so with all inventors: their work is in no wise a creation, but a discovery, and the thought in each instance was first suggested to the mind by some phenomenon in Nature.

As man's wants increase and these are made known to his mind through one or more of the five senses, he at once seeks the very best way to supply them. This leads him to investigate and to investigate leads to discovery and discovery to progress. It would seem from this, then, that suggestion is the father of thought. The same phenomenon, however, do not produce the same thought in each individual mind. No doubt the chandelier and the teakettle were seen to move by thousands long before the proper thought found proper soil for the planting that gave such a harvest. But it appears to be universally true that thought comes by suggestion or, in other words, it is the result of association of thoughts with thoughts, or of thoughts with other phenomena.

We have now proceeded far enough in our investigation to state this proposition—that good health depends very largely upon good actions, good actions depend upon good thoughts and good thoughts are the direct results of good suggestions. It seems to me that it is upon this

basis that the whole structure of psychotherapy rests. Climate, association and heredity all play a conspicuous part in determining the mental make-up of man, but beyond this we can not go until more light is shed to scatter the gloom of ignorance. The realm of motive and desire is impregnable; the world wherein is born individual idiosyncrasy has never been explored, yet the field of psychotherapy is almost boundless, and it is to the practical side of this question that I now desire to call your attention.

There are two principal methods by which we may psychically influence our patients: First by stating an hypothesis, whether true or false, that is in harmony with the patient's accustomed beliefs and induce him to reason therefrom; second, by stating a true hypothesis irrespective of his beliefs and teach him to reason from that basis to a true and logical conclusion.

The first mentioned method, commonly known as suggestive treatment, is practiced consciously or unconsciously by every physician. To this form also belong whatever success is and may be attained by the many different schools of faiths and isms and carried to its extreme degree is known as hypnotism. Through this method also the medicine quack and nostrum vender reach the purses of their victims, and by it many people are influenced to acts which, when not under the spell, would be utterly foreign to them. Every young doctor who enters the medical arena seems intuitively to realize that much of his future success depends very largely upon his personal appearance, and, though every one may not bedeck themselves with a showy Vandyke or Prince Albert, each strives to carry himself with that air of professional and personal confidence calculated to inspire his associates with wonder, if not with awe. When he speaks he manages to let slip a Latin phrase or a high-sounding word now and then that will cause his hearers to believe him educated, to look upon him as being well read and up in his profession, and the history of the past has taught us that the more the doctor spreads on without becoming affectations, the more successful will he be with a large percentage of the people. I mention this merely to show that this form of suggestion, if it succeeds, must harmonize with the patient's accustomed beliefs and does not necessarily seek aid from his higher intelligence. It depends for its success upon the patient's credulity, upon his willingness to believe what he sees and hears. Each statement from the physician to such a patient should carry with it the assurance or even promise of cure.

Aside from his personality, which is of no mean importance, the physician must not waver nor hesitate; his remedies must be accompanied by words of assurance that they will cure. When using this form of suggestion it is not necessary to listen long to the patient's description of his ailment, but rather grasp the situation and tell him how he feels. This, if rightly done, establishes a confidence that will be more responsive to the suggestions along the line of treatment.

An impressive personality and the assuring words are not all the requirements necessary to a successful physician in the practice of



psychotherapy. He must first have absolute confidence in himself before he can inspire the required confidence in his patients. And by reason of his knowledge, based upon study and experience, he must feel that he is master of the situation. He must entertain no doubts himself as to the outcome of the case, if he would do the greatest good. The natural tendency of all disease is toward recovery, and the principal business of the doctor is to allay the annoying symptoms. Many of these symptoms are the result of fear on the part of the patient and the tension due to dread, which the doctor's presence and assurance relieves. In view of the fact that most diseases run a specified course, it is difficult to draw the line where psychic treatment ends and medication should begin. Every man, woman and child is a law unto himself, not only when viewed from a standpoint of psychotherapy, but from that of medication as well. No hard and fast rule can be given, but each individual case must be studied on its own merits. Wherever an unhealthy thought is found, it should be eradicated and its place supplied by a healthy one. If a person thinks he is dangerously ill, he is sure to be in a state of restlessness, his whole body will be in a tension, and under such circumstances not an organ in his entire system can perform its function normally. Supply this morbid thought with one radiant with hope and you have mastered the case.

Have you ever noticed how closely you are watched by the patient when at the bedside of the sick? The sufferer is reading your face, and he has learned long ago that the face is the true index to the mind. Assurance and confidence should characterize every word, every look and every movement of the doctor when in the presence of his patient. Just as pathologic conditions must be supplanted by physiologic ones, so too unhealthy thoughts must be changed to healthy ones. This gives to the patient peace of mind with its attendant relaxation, more important than which there is no greater, no more beneficial therapy. Had the medical profession recognized this fact a hundred years ago and utilized its power for good to the extent it so richly deserves, faith healing, Christian Science and all allied isms would be unknown to-day.

The second method by which we may psychically influence our patients and the one, in my judgment, destined to take the place of all others, is that which may be known as psychotherapy by educational means. The patient is made to understand his real condition by a true and logical explanation of his symptoms, their causes and probable duration. If an ailment is a physiologic one (and most diseases are) explain this to him and let him understand the difference between this and sickness due to anatomic changes. Teach him the truth. Let him know what disease is; that it is not an entity, not an individuality, but a condition, and that this condition must be righted by forces from within rather than from agents administered from without. In my judgment, it is no mistake to inform him that drugs do not cure, but that they are merely helpers. This will give him an hypothesis from which to reason, and he will be able to account for his own symptoms and their continuation. He will then readily submit to the condition and wait with pa-

tience until his health is restored. He does not toss about on his cot in a restless worry; he is not continually telling you at each visit that your medicine has done him no good and you will not have to scratch your head so often for some apparent excuse for his continued pain, but, knowing the condition, he can understand why he feels bad and that it is impossible to be sick without suffering pain.

I hope I have made myself clear on these two forms of suggestion, or, rather, the same suggestion applied in two different ways. Each of these two forms has its field of usefulness, and there are many people suffering from diseases whose reason can be of little assistance to the physician, but I believe it our duty to do all we can by direct education to clear the public mind of the erroneous belief in drugs and disease and pave the way for a more substantial and more nearly perfect system of therapy. No science can stand upon falsehood; no therapy can endure within whose foundation there is a single placebo, and so I believe that truth instilled within the minds of men will be productive of more good than any form of deception.

I would carry this teaching, this education, into the field of preventive medicine. Here is the greatest work. For just how much sickness is due to published testimonials and advertising literature and general lack of knowledge along this line is difficult to tell, but one thing is certain, when the public thoroughly understands the true relation of drugs to disease, quacks and nostrum venders will have to hunt a new job. When the people come to know that it is the patient that needs the treatment and not the disease, patent medicines will go begging.

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## THE TREATMENT OF GENERAL PERITONITIS COMPLICATING APPENDICITIS.\*

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Our mortality in the operative treatment of the various forms of appendicitis has decreased materially in the past fifteen years. Operations performed during the interval between recurrent attacks are accompanied by a mortality of a fraction of 1 per cent. Almost the same good results are beginning to follow the removal in the acute stage either with or without abscess formation. Our percentage of recoveries, however, in that much-dreaded complication of appendicitis, viz., general or diffuse peritonitis, is still too high in the hands of the majority of operators. If surgeons could only secure the cooperation of the general practitioner toward achieving earlier operation, the number of recoveries, even in this last named class of cases, would leave little to be wished for. It is with the object of calling the attention of our medical colleagues

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to the possibility of such cooperation that this paper is written. Before proceeding to discuss the results of our treatment of these cases at the Michael Reese Hospital, of Chicago, it will be necessary to take up a few general considerations.

We must first define what we mean by general peritonitis. The most generally accepted definition is distribution of exudate free in the general peritoneal cavity without any tendency toward walling off. In some cases of general peritonitis there are multiple encapsulated collections of pus. Such cases have been termed spreading or progressive peritonitis, and, although the foci may be widely distributed, they form a class by themselves. Some claim that we can not speak of a general peritonitis unless every portion of the visceral and parietal peritoneum are involved. It would be folly to insist upon every case fulfilling this requirement. In every day work when we open an abdomen and find a seropurulent or purulent exudate as far as the eye can see without any effort at encapsulation, accompanied by corresponding macroscopic changes in the peritoneum itself, both visceral and parietal, we are justified in speaking of a general or diffuse peritonitis. As we open the abdomen in more and more cases the fact is becoming very apparent that there is (a) a difference in the virulence of the same organism, and (b) there is a disproportion in many cases between the pathological changes seen in the peritoneum and the clinical symptoms. In other cases the study of living pathology has taught us that the streptococcus or the colon bacillus taken at operation from two individuals may grow the same upon all of our known culture media and yet the appearance of the peritoneum, the amount and character of the exudate, and last, but not least, the clinical signs of infection, be entirely different in the two individuals.

This variation in virulency or toxicity of the same organism is a most important factor in the prognosis of every case and one which we can not estimate in advance. Two patients may appear equally ill and receive the same treatment in every detail, yet in one case the infection is controlled and the patient gets well, in the other it is not so mastered and he or she dies in spite of every effort. In some cases a patient who has been ill twelve hours will show few macroscopic changes or exudate and yet the clinical phenomena will be those of the most severe and often fatal type. Ordinarily a general peritonitis is the direct consequence of the escape of the organisms through a perforation or gangrenous area of the appendix. Our views in regard to these as the only avenues of infection are changing. I have personally had three cases in which most scrupulous examination at the time of operation failed to reveal any macroscopic perforation. In our series of 34 cases, the condition of the appendix was described in 30. In 7 of these there was no visible perforation.

In a recent report of 65 cases of peritonitis after appendicitis by Hirschel,<sup>1</sup> there were four in which no perforation of the appendix

1. Beiträge zur Klinischer Chirurgie, vol. lvi.

could be found. In two of these there were only catarrhal changes in the appendix, but the exudate was thick and purulent. Noetzel and Sprengel have also reported similar cases. In our own cases of peritonitis without demonstrable perforation of the appendix, the exudate was seropurulent and the appendices showed varying degrees of acute catarrhal changes. Lennander<sup>2</sup> has shown that peritonitis can occur after an acute enteritis without a perforation. Oppenheimer<sup>3</sup> and Martin<sup>4</sup> have also reported cases of general peritonitis without demonstrable lesion.

The only other points I wish to mention in the pathology are: (a) The septic paralysis of the intestines; (b) the involvement of the parenchyma of the kidney, liver and heart muscle. As to the septic paralysis, this is the cause of the abdominal distension and of the vomiting. In the majority of cases it does not appear until the third or fourth day. When present, it is a most important factor, because the intestinal muscles above the point of paralysis attempt to contract in order to propel the septic fluid contents toward the anus, but instead, a retro-peristaltic wave sets in and the persistent vomiting so distressing to the onlooker, soon ends the picture. I shall speak of the value of enterostomy as a life-saving measure in such cases later. The involvement of the liver, kidneys and heart muscle is equally as vital a factor. In one of the writer's cases the general septicemia carried off the patient in spite of apparent recovery from the peritoneal condition. These are the cases which have been correctly termed peritoneal sepsis.

The length of this paper will not permit of a long discussion of the diagnosis and differentiation of these cases from other causes of peritonitis. There are, however, a few points to which I wish to refer briefly. The most valuable clinical evidences of the presence of a peritonitis are rigidity and tenderness over the abdomen and increasing rapidity of the pulse rate. I now speak of diagnosis in the first 72 hours, when operative treatment can still be of avail. After that, every novice can make a diagnosis from the septic appearance, dry beefy tongue, rapid weak pulse, general abdominal distension, absolute constipation and persistent, often fecal vomiting. *It is criminal to wait until such symptoms appear before making the diagnosis.* If a patient who has shown the generally accepted initial signs of appendicitis begins to be rigid and tender to the touch all over his or her abdomen with a steady rise in the pulse rate, even without fever, leucocytosis, distension or vomiting, there is enough presumptive evidence upon which to base a verdict of a general peritonitis. The presence of a rise in temperature and of a leucocytosis are such uncertain factors that their value is only collateral, i.e., if there is a leucocytosis and fever, accompanied by general muscular rigidity and tenderness and increasing pulse rate, these two signs are of considerable value. In many cases, however, the leucocytosis is either absent or a little above normal, owing to lack of resistance, and unless we interpret

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2. Zeitschrift für Klinische Medizin, vol. lxiii.

3. Deutsche Zeitschrift für Chirurgie, vol. lxxxiii.

4. Annals of Surgery, vol. xlv.



this in connection with the other signs we are apt to be led astray. The same is true of temperature, which may or may not be higher than normal. The pulse rate is very rarely subject to such variation, although it is in a few cases surprisingly low in proportion to the degree of infection and exudate.

This little digression to consider a few of the points in relation to diagnosis was necessary in order to fully appreciate the difficulties of treatment.

General peritonitis was formerly regarded as an almost certainly fatal complication of appendicitis. This pessimism has given way to decidedly optimistic feeling. If such cases can be operated by the surgeon during the first 24 to 48 hours, the majority can be saved. Where the percentage of mortality was 75 per cent. fifteen years ago, we can reduce it to 10 per cent., or even less, by operating early and using better judgment in the selection of cases. By the latter statement, I mean refusing to operate cases with such advanced symptoms of sepsis that operation rather hastens a fatal outcome.

Reference will be made later to the greater usefulness of the opium or starvation treatment in tiding such patients over to an interval operation. Earlier diagnosis alone is not the only factor which has improved our percentage of recoveries. The other factors which have contributed materially are: (a) The use of some form of postoperative position which will favor drainage toward the pelvis; (b) a minimum amount of handling of the intestines; (c) rapid technic in the removal of the appendix; (d) by aiding the elimination of toxins through the kidneys by the use of large quantities of normal saline solution given continuously per rectum. This latter aid was first brought out by Dr. J. B. Murphy. Irrigation of the peritoneal cavity with salt solution during the operation has not been mentioned as one of the aids because equally good results are being obtained without it.

Let us consider these methods a little more in detail. (a) The postoperative position. Museatello has shown that the principal absorbent surface of the peritoneum was upon the inferior or abdominal side of the diaphragm. The lymphatics here are the most numerous and active, very few lymphatics being present elsewhere. George R. Fowler, of Brooklyn, was the first to utilize this knowledge by placing the patient after operation in an upright position, thus allowing the septic material to flow toward the pelvis, from which it was removed by properly placed drains. The Fowler position is not easy to maintain, especially if the patient is restless, and tends to slip down. A much easier position in many cases is elevation of the head of the bed, but I do not believe it is as effective. Some surgeons have attempted to overcome the difficulty of drainage by making counter incisions in the lumbar regions and permitting an ordinary supine position. With the idea of preventing patients in the Fowler position from slipping down, the writer has modified the ordinary back rest by placing crutch-like arms under the axillæ.

These supports can be raised or lowered or brought further toward the median line in order to accommodate the different widths or heights of patients. I have used it in my six cases with very satisfactory results. The axillæ must be well placed in order to prevent any nerve pressure. A similar idea is that of Dr. J. E. Allaben, of Rockford,<sup>5</sup> who employs an ingenious wooden device for maintaining the same position.

The use of the Fowler position has been one of the most important factors toward effecting a greater number of cures in these cases of peritonitis. The second and third improvements in our treatment, rapid technic and minimum handling of the intestines require but little special mention. It was formerly the custom to make a large incision, eviscerate the intestines and irrigate or rub off the exposed coils. The exposure and replacement of so many coils was the cause of great shock and often turned the tide against the patient. We now make a small incision, remove the appendix as rapidly as possible and do not expose a single coil of intestine more than is necessary in retracting the edges of the small incision.

The fourth aid, viz., the continuous rectal administration of saline solution, is also a vital factor. If given so that a drop will run into the rectum every second with very little pressure, the irrigator not being placed more than eight inches above the level of the bed, it is surprising how large a quantity of the fluid will be taken up. It is not unusual for ten pints to be absorbed in 24 hours. It promotes diuresis, keeps the tongue and skin moist and quenches the almost insatiable thirst.

Our ordinary method of administering the saline solution has been to keep the liquid at a temperature of 100 degrees by surrounding the irrigator with hot water bags. This requires considerable attention on the part of the nurses and in order to be sure that the solution was maintained at a constant temperature. I have devised an apparatus which consists of a double jacketed cone of tin or copper. The water can either be heated by an alcohol lamp placed at, or better still, by a little electrical device which will maintain a constant temperature. The saline solution is in the glass percolator whose sides are in close contact with the water jacket. The flow is regulated by a screw placed on the rubber tube and the temperature of the water can be taken by inserting a thermometer into the percolator. This apparatus has been used by some of my colleagues and the writer with great success.

A few words more in regard to some of the other aids. There is considerable discussion at present as to whether the peritoneal cavity should be flushed with saline solution during the operation or no irrigation used at all. Equally good if not better results are being obtained by the so-called dry method, which consists in simply placing a drain after the operation without any attempt at irrigation and it is the judgment of those who are obtaining a large number of cures that irrigation is superfluous.

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5. Journal of the American Medical Assn., 1907.

The material employed for drainage is also a matter of individual experience. Only three varieties need to be considered: (a) Glass or rubber tubes; (b) cigarette drains; (c) Mikuliez or umbrella gauze drain. Each method has its warm supporters. Our own results were equally good with all of these, but I believe that the rubber tube or Mikuliez drain will be sufficient for all ordinary cases. There are still two points in the postoperative treatment which I wish to refer to briefly. First, it is not necessary to give cathartics to these cases, and the same is true of drugs which promote peristalsis like physostygmín. The more the intestines are kept at rest the greater our chances of preventing diffusion of the pus. A mild enema given every day will suffice for the first week or longer. A second important point is not to fill up the patient's stomach with fluids. If saline solution is given per rectum these cases can get along for three or four days with only a small amount of fluid, say an ounce or two every hour after the first 24 hours. In two of our cases death was directly due to acute dilatation of the stomach, the result of too liberal administration of fluids during a time when the septic paralysis of the intestinal coils would not aid the absorption of these fluids. I now insist upon the greatest caution in this direction.

I wish to report 34 cases of general peritonitis which were admitted to the services of Drs. L. L. McArthur, E. W. Andrews, L. A. Greensfelder and the writer in the Michael Reese Hospital, Chicago, during the past nine years. These cases were operated upon, as a rule, immediately after admission. Our system of filing histories has only been perfected during the past year, so that undoubtedly some cases have not been included in these statistics. These 34 cases were admitted in all stages of the disease and the results are about the same as are being obtained elsewhere. Our percentage of recoveries in these 34 cases was 59 per cent. This embraces patients operated upon during advanced stages of the disease. In a number of these the patients were in such desperate condition that death occurred within a few hours after admission. We have now learned not to operate on such hopeless cases, but to treat them by elevating the head of the bed, giving them saline enemas containing coffee and whisky and nothing by mouth. There is no question in the mind of the writer that far better results can be obtained in these advanced cases by such a modified Ochsner treatment, than by operation.

For the above reasons our mortality may seem rather high. If, however, we note the day of the disease upon which operation was performed, there is a material difference and the results are the equal of any obtained in the best general hospitals to-day. Of 21 cases where the day of the disease was mentioned in the history 2 cases were operated during the first 24 hours with 1 recovery and 1 death. In 10 operated on the second day there were 8 recoveries and 2 deaths or 80 per cent. recovery. In 6 operations on the third day there were 2 deaths, i. e., 66 per cent. recovered. These results compare very favorably with those obtained at the large American and European general hospitals which were as follows:

	Cases.	Mortality Per Cent.
Moynihan <sup>6</sup> .....	17	18
Carson <sup>7</sup> .....	22	63
Herzel <sup>8</sup> .....	48	68
Ilagen <sup>9</sup> .....	30	60
Hirschel <sup>10</sup> .....	65	54
Körte <sup>11</sup> .....	27 first 48 hrs.	18
	30 third day	36
Arnsperger <sup>12</sup> .....	33	51
Biondi <sup>13</sup> .....	13	80
Bode <sup>14</sup> .....	30	33
Lieblin <sup>15</sup> .....	71	71
Blake <sup>16</sup> .....	..	..
Heidenhan <sup>17</sup> .....	42	55
Hotchkiss <sup>18</sup> .....	28	17

The exudate in our cases varied from thin turbid serum to thick fetid pus. Perforation or gangrene of the appendix was present in 23 and absent in 4. In 17 cases saline irrigation was employed with 10 recoveries and 7 deaths. In 12 no irrigation was used with 8 recoveries and 4 deaths, showing that equally good results are obtained by both methods. Glass drainage tubes were used in 12 cases with 8 recoveries and 4 deaths. Mikulicz gauze in 14 cases with 8 recoveries and 6 deaths. In 4 cases a cigarette drain was used with 4 recoveries. In two cases no drainage was employed and both of these recovered. This latter method is much used in the Roosevelt Hospital, New York, by Blake and others. After irrigating the peritoneal cavity thoroughly they sew up the parietal wound almost completely, leaving a drain at the lower angle, which extends to but not through the peritoneum. Their results have been very satisfactory.

In all of our cases operated during the past eight years, either the Fowler position or elevation of the bed was employed. The after-treatment consisted either in the use of continuous saline solution given per rectum or enema of salt solution; coffee or whisky given every four hours. Very little was given by mouth for the first 72 hours and, as a rule, no cathartics were administered. In 21 cases the incision was mentioned in the histories. In 4 it was a median and 17 lateral. Of the 4 median 2 died and of the lateral 10 died. The best results are obtained by removing the appendix through an incision (known as the modified Battle or Kammerer) along the outer boarder of the right rectus muscle and inserting the drain toward the pelvis.

6. Lancet, Aug. 17, 1907.

7. British Medical Journal, Nov. 10, 1906.

8. Pathologie der Appendicitis, 1906.

9. Beiträge zur Klinischen Chirurgie, vol. xlviii.

10. Beiträge zur Klinischen Chirurgie, vol. lvi.

11. Archiv. für Klinische Chirurgie, vol. lxxvii.

12. Deutsche Medizinische Wochenschrift, No. 3, 1905.

13. Policlinico No. 2, 1906.

14. Beiträge zur Klinischen Chirurgie, vol. xlv.

15. Prager Med. Woch., July, 1906.

16. Annals of Surgery, vol. xlv.

17. Mittheilungen aus den Grenzgebieten, vol. xviii.



If the temperature does not fall, or if it recurs, one should immediately suspect the presence of an encapsulation of some of the pus between coils of intestines or the occurrence of a subphrenic abscess. As to the former, if left alone, the majority of these will rupture toward the drain and the pus escape. In some cases, however, it will be necessary to locate the abscess by the localized tenderness, rigidity and dullness and make an incision down upon such focus. At times examination per rectum or vaginam will elicit bulging and the secondary abscess can be opened through these.

In advanced cases with marked septic paralysis of the gut and in those patients who continue to vomit after operation, enterostomy is often indicated and will prove to be a life-saving measure. The artificial anus should, if possible, be made above the paralyzed gut. The urine should be carefully watched for evidences of atoxic nephritis. There is no question that if these cases are brought to the surgeon during the 24 to 72 hours the majority can be saved.

#### DISCUSSION.

Dr. A. P. Heineck, Chicago:—Dr. Eisendrath has spoken about the treatment of generalized peritonitis secondary to appendicitis. The subject is one of great practical importance. It is very essential from the diagnostic and therapeutic standpoint that a clear distinction be made between circumscribed suppurative peritonitis and diffuse suppurative peritonitis. Though either may complicate an attack of appendicitis, though the latter may be secondary to the former, circumscribed suppurative peritonitis and diffuse suppurative peritonitis are two different pathological entities. Statistics, to some extent, have been vitiated, because cases of the former successfully treated have been reported as cases of diffuse peritonitis which have recovered. In acute circumscribed suppurative peritonitis, we have a pus collection which may be large, which may be small, but which is always walled off from the general peritoneal cavity by a more or less firm fibrinous-plastic exudate. Upon evacuation, spontaneous or operative, of this pus and prevention of its re-accumulation, recovery very frequently ensues. In diffuse suppurative peritonitis we have vast surface absorbing bacteria and toxins. This absorption, too frequently, determines an overwhelming, a fatal intoxication of our patient. Diffuse suppurative peritonitis is a condition which we have not yet learned to control. It has an appalling mortality. In the presence of diffuse suppurative peritonitis, with our present therapeutical resources, we are usually powerless. There is one thing, however, which we can do. And that is to limit the number of cases of diffuse suppurative peritonitis. How? By teaching:

1. That appendicitis is essentially a surgical condition and that each and every case of this affection calls for early surgical intervention. We should not yield to the entreaties of patients suffering from appendicitis to make use of non-operative forms of treatment. To yield to such requests is to invite disaster.

2. That the medical treatment of this condition is fallacious, is unscientific. Each and every attack of appendicitis non-operatively treated predisposes to subsequent attacks until complete obliteration of the entire appendiceal canal has been effected. It is medical treatment of appendicitis that is responsible for the occurrence of diffuse suppurative peritonitis consequent to appendicitis.

3. That it is far easier, far more productive of good, to learn how to operate successfully in cases of appendicitis than to become conversant with the various non-operative treatments that have been proposed for this condition. Much as I value the "starvation treatment" in cases of peritonitis, I have to state emphatically that, as a method of treatment for appendicitis, it is far inferior in value to appendectomy.

The mortality from this condition (diffuse suppurative peritonitis) is high. A number of eminent clinicians tell us that they have treated a large number of cases of suppurative peritonitis according to a certain method, with little or no mortality. The only thing I can say in regard to that is that those men have been exceptionally fortunate. We have employed at the Cook County Hospital a method elaborated by Dr. J. B. Murphy. It has given us less disastrous results than any of the other methods employed. The essentials of the method are: 1. Absolutely no food, liquid or solid, per mouth. 2. Elimination of all time-consuming procedures at time of operation. 3. After operation, employment of Fowler's position. 4. Drainage by tube of the lowest portion of the pelvis through a suprapubic opening and also free drainage through the operative incision. 5. Absorption of large quantities of water through the rectum so as to cause an increased elimination of urine and toxins; so as to convert the peritoneum into a secreting and not an absorbing surface.

We are satisfied that the irrigation with normal salt solution of the peritoneal cavity in cases of diffuse suppurative peritonitis is fallacious. It is harmful. It disseminates the infection instead of circumscribing it. We have obtained results in cases of diffuse peritonitis secondary to appendicitis by making an incision and removing the appendix, if it be easily accessible, and not having recourse to such a traumatizing procedure as the wiping or washing of the intestines with normal salt solution.

Another thing we must impress upon the practitioner is that catharsis is not a panacea for appendicitis. To a patient who has an acute appendicitis, I would say, never give cathartics; operate. I am satisfied that this is a safe teaching. I had last week two cases of appendicitis complicated by diffuse peritonitis, in each of which the patients had been actively purged. This excessive peristalsis does not give the inflammation of the appendix any chance to resolve; it lessens the tendency to the formation of protective adhesions and increases the liability to spread of the infection to the general peritoneal cavity.

Dr. Edward H. Ochsner, Chicago:—The difficulty about surgical statistics is that no two surgeons make exactly the same definitions nor follow exactly the same rules in observing their cases, consequently surgical statistics compiled by different men are of very little comparative value. While the definition given by Dr. Eisendrath is quite generally accepted, it leaves so much leeway for the personal equation that the objections cited against surgical statistics in general hold in this case also. No two surgeons seeing the same cases of suppurative appendicitis will uniformly agree in their opinion as to whether certain cases should be called general suppurative peritonitis or localized peritonitis. In order to minimize this difficulty we have for the past nine years classified our cases of appendicitis in the following manner: (a) Acute appendicitis with general peritonitis; (b) acute appendicitis with perforation or gangrene of the appendix; (c) acute appendicitis without perforation or peritonitis; and (d) chronic appendicitis. This classification has the advantage of separating the cases into two great groups, a and b, consisting of those cases in which the infection has gone beyond the tissue of the appendix, and c and d, comprising those in which the infection has remained within the appendix proper. It is usually quite easy to determine to which of these two great groups the individual case belongs and after all the essential point is whether the infection has gone beyond the tissues of the appendix or not.

In the past nine years we have had nearly 1,000 cases belonging to the first group and over 2,000 cases belonging to the second. In the first group we have placed all cases of appendicitis in which at the operation or at the postmortem it was found that the infection had gone beyond the tissues of the appendix, and this group included many late and moribund cases of appendicitis. In spite of this fact our mortality in group one for the last nine years has not exceeded 11 per cent.

I quote these statistics to emphasize the benefit of the treatment recommended by my brother some nine years ago, with which you are all familiar,

which consists of absolute starvation and rectal alimentation. I believe that by this method many of the cases can still be saved which would succumb to operation if operated during the period of greatest danger, say from the third to the sixth day after rupture has taken place. If these patients are put in the Fowler position, if the regimen above outlined is properly followed, 89 per cent. of all cases of group one can be saved, even though the infection has gone beyond the tissues of the appendix.

Dr. Eisendrath (closing the discussion):—I simply want to endorse exactly what Dr. Ochsner has said, and that is the point which I brought out in my paper, namely, we have given up operating on those cases where the patients come in to us on the fourth or sixth day with a pulse of 160, and look thoroughly septic. We simply treat them by the Ochsner starvation method at the present time and are getting the same proportion of recoveries as they are getting now, where we formerly lost every one of them. The Ochsner treatment is a distinct advance in these cases.

The 5 per cent. mortality spoken of by Dr. Ochsner seems small unless we have further statistics from him. He makes up his statistics from cases of localized abscess formation and general peritonitis. Unless we can have their percentage of mortality in the abscess formation cases by itself, and the secondary percentage of mortality in the cases of general peritonitis, the two can hardly be compared.

As regards the question of general peritonitis being present, if there is only a lot of serum, I can say the same as Dr. Ochsner does, that we do not call them cases of general peritonitis. The fluid must be purulent to call these cases general peritonitis and accompanied by microscopic changes in the peritoneum.

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## PUBLIC DUTIES OF PHYSICIANS.\*

HENRY BIXBY HEMENWAY, A.M., M.D.

EVANSTON, ILL.

In conferring a collegiate degree it is customary for the representative of the school to say to the candidate something like the following: "I admit you to the rank of" (naming the degree) "and give to you all the rights, honors, privileges and duties pertaining thereto." Neither the president of the institution nor the college itself has any inherent right to use such expressions. They are delegated to do so by the state, through the charter, and the degree comes from them as the representatives of the commonwealth. The faculties and trustees, therefore, of medical schools have no moral right to use their positions for personal gain, but it is their duty to see that all receiving the degree of Doctor of Medicine are fully qualified in accordance with the highest standards of the profession.

Since the state confers the title, and with it the duties and privileges, every recipient of the degree should recognize the public duties peculiar to his rank. It is not a public duty to respond to every call for his professional services. This has been determined in the courts. The broad laws of humanity may sometimes require the gratuitous services of a physician, but, generally speaking, the community has no right to use the time and skill of a physician without adequate compensation. This

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\*Read at a meeting of the Chicago Medical Society, Nov. 11, 1908.

is particularly true of such service as requires special skill and training, and from which the physician receives no other compensation. Making the statement more clear, it is doubtful if it is for the good of any one to make services of physicians and surgeons absolutely free in hospitals and dispensaries. It often happens that the attending physicians in hospitals receive no money compensation for the treatment of patients, who would be glad to make arrangements for the payment of a well-qualified physician *of their choice*, if he were permitted to attend them. The medical profession is thus deprived of a portion of its legitimate income. Still, the experience gained in treating one case aids in another, and is a degree of compensation. If, however, this hospital work takes a large share of the time of the practitioner, it would seem that he should be paid in proportion thereto by the hospital if not by the individual patient. Imagine any other class of men giving their professional services regularly for experience only, except during their apprenticeship.

Is there any good reason why a professor of language or mathematics should be paid a salary, and a professor of medicine should be assessed for the privilege of teaching? Is not that fact a demonstration that medical college professorships are largely ethical advertisements? Would not the standard of teaching be raised if the chairs in medical schools were endowed?

Further, when the work requires a special education, occupies the full time, and gives little experience that is valuable financially in private life, members of the medical profession should receive payment at least on a par with attorneys and judges, for example, and the united profession should make this demand.

Every practitioner of medicine is, to a degree, a public official. Chapter 78, Section 4, of the Revised Statutes formerly read: "The following persons shall be exempt from serving as jurors, to-wit: the governor, lieutenant governor, secretary of state, auditor of public accounts, treasurer, superintendent of public instruction, attorney general, members of the general assembly during their term of office, all judges of courts, all clerks of courts, sheriffs, coroners, postmasters, mail carriers, practicing attorneys, all officers of the United States, officiating ministers of the gospel, school teachers during the terms of school, practicing physicians, constant ferrymen, mayors of cities, policemen and active members of the fire department." By the act of 1905 there were added to the list "registered pharmacists and assistant pharmacists, embalmers, undertakers and funeral directors actively engaged in their business, and all persons actively employed upon the editorial or mechanical staffs and departments of any newspaper of general circulation, printed and published in this state." It will be noticed that of the original list the only ones about whose standing as public officials there could be any possible question are ministers, physicians and ferrymen. Our laws are, to a great degree, transcripts from those of England. There, and in other countries, the clergy form an integral part of the legislative and judicial departments of the government. In this country their official relationship is shown by the fact that when they perform the marriage ceremony



it is as binding in law as though performed by the chief justice, and only by court action can the marriage be annulled. Ferry-men were formerly often appointed or elected, and even when the duties were voluntarily assumed they were commonly considered on the same plane with post-masters. The exemption of physicians, therefore, would hardly be excusable in this act unless they were *quasi* public officers.

The statutes fully and properly define who shall be considered practitioners of medicine by the medical practice act, and other statutes mention certain public duties. Chapter 126a makes it a duty of every physician attending a woman in confinement to report the facts of the birth to the county clerk. In assuming the charge of a case, the physician enters into a contract to give the reasonable and ordinary care of the patient; and *McNevin vs. Lowe*, 40 Ill., 209, shows that the fact that the service is gratuitous does not lower the standard of the care requisite. The physician present at the birth of a child is the most important witness thereof, and, since his testimony may not be called for until after the time of his probable death, the law very properly demands of him that his testimony be recorded in writing, and immediately. This testimony may be needed by the child, or others, to prove legitimacy, heirship, age, citizenship, or title to property. Americans are sometimes greatly inconvenienced because a copy of the birth certificate is required in many foreign countries before a legal marriage can be performed. A physician engaged to attend a case of confinement, therefore, has not completed his care, nor dealt justly with his patron, until he has made this record.

Chapter 126a further requires that physicians in attendance upon a person shall make legal report of the death of a patient. Accurate vital statistics must be the basis of all real sanitary progress. Here, again, the testimony of physicians is essential, and a practitioner who habitually fails to comply with the spirit of these laws should be deprived of his license. It has been remarked that if a valuable horse, or cow, or hog, or dog either is born or dies the fact is immediately recorded. Not to be able to show records of pedigree is *prima facie* evidence of low breeding. A physician who neglects his reports of births and deaths shows thereby that he regards his patron as only on a par with common swine.

State and municipal regulations demand that practitioners promptly report to the health department cases of contagious disease coming within their notice, including transients. This is necessary that the department may take steps for restricting the disease. In some states this report must also give the probable source of the contagion. This notice should also include such general items of information as shall enable the department to work efficiently, without loss of time. For example, if a number of reports of typhoid fever are received on a given day, perhaps widely separated, much time may be saved in the search for the origin of the disease if each report mentions the source of milk and water supply, school attended, etc.

It has sometimes been affirmed by practitioners that they should not be compelled to report contagious diseases, especially without extra pay, and that it is the duty of the department to find the cases through its inspectors. Such an idea is contrary to the public weal. It would require an undue tax upon the people. Every member of a community owes certain duties to the others. It is the manifest duty of one who discovers a fire to immediately give the alarm. Greater responsibility rests upon him who discovers a case of contagious disease, because its action is more insidious and requires special training for its recognition. Neglect to report is, in effect, concealing the case, and is a moral crime, even if the law does not compel reporting it. It is quite possible that if through the negligence of a physician to report a case of contagious disease seen by him in the person of A an innocent person, B, becoming exposed, contracts the disease and dies, the physician might be held civilly and criminally liable for the death of B. It, therefore, behooves practitioners to be on the safe side and promptly report even suspicious cases, if they are imperfectly isolated.

Until the department can act in the case, it is the manifest duty of a practitioner to see that the patient is isolated, and the spread of contagion prevented. The health department should, and does, determine certain general rules governing these cases. School and other authorities should only recognize the permit of the health department, after exclusion on account of contagious disease. The private practitioner's certificate should only go to the health department. Acceptance of such certificates by school authorities takes from the health department an efficient means of controlling disease. The same is true relative to disinfection, and the certificates of vaccination. Unfortunately private certificates are not always truthful, and the health department is better qualified to detect errors. There should be heavy penalties for making false certificates, and repeated conviction should be sufficient cause for canceling a physician's license. The private practitioner has no right to expect that his certificate will be taken as an *order* for disinfection, or return to school. Disinfection as ordinarily practiced is worse than useless. It gives a false sense of security. Since the object of disinfection is to prevent the spread of disease, it should always be performed, or supervised, by the health department.

What diseases should be reported? In the light of modern investigation, it would seem that the ordinary lists should be revised. If yellow fever is included, malarial fever should be also. Tuberculosis is now included in the lists of some jurisdictions, and it should be in all. Gonorrhea has always been considered a strictly private, or secret, disease. We are told that it causes untold suffering to innocent persons. Why should any one be permitted to spread this disease with impunity? Why should the criminal be shielded by secrecy? Why should not gonorrhea and syphilis find their places in the legal list, rather than that rare disease of typhus fever, which is almost extinct?

There is another duty which physicians owe to the community. It is incumbent upon every citizen to aid public officials in the discharge of their duties, and it is to be peculiarly expected that physicians shall

support the health departments, local, state and national. This they may do by helping to create a popular appreciation of the importance of the work, and aiding in securing efficient legislation. Public sanitation can not advance far beyond popular education. Though sanitary science has attracted attention since the time of Moses, it is still in its infancy. The people know little about it, but they imagine that there is little more to be learned. Public interest should be inspired.

This is a commercial age, and a commercial nation. It spends money freely on commercial investigations, but it neglects human life and health. It has been willing to invest thousands of dollars to solve the problem of making a hen lay more eggs, or to discover the bacillus which will produce the best flavored butter. At the same time it has permitted the needless murder of hundreds of thousands of its citizens by the *Bacillus typhosus*.

Confining our attention to our own state: What original investigation has the State Board of Health undertaken to advance the science of sanitation? In what field of sanitary knowledge has the State Board done valuable work? When the troops were recently assembled in Springfield some regiments were dependent upon wells for their water supply? Was the water safe? No one knew. Samples were collected and taken to the Department of Health, and Col. Marquis was informed that they would be sent to Urbana for analysis, as there were no facilities in Springfield for such work. It must be recognized that such conditions are unsatisfactory and unscientific. Some germs would perhaps die before the laboratory was reached, while other species would very greatly multiply. To be of value the bacteriological examination of water should be made without delay. For a similar reason the recently published examination of municipal water supplies is of little sanitary value. Few waters were examined bacteriologically, and such examinations as are recorded fail to give most important data, such as the time between the collection and examination of the water.

England has exterminated rabies. Illinois permits the disease to spread and treats the patients.

The last published report of the state auditor is for the years ending Sept. 30, 1905, and Sept. 30, 1906. In Statement 3, under the heading University of Illinois, we find the following expenditures (p. 145):

Agricultural College Experiments.....	\$112,500.00
Experiments in stock feed.....	56,250.00
Experiments in corn .....	28,750.00
Experiments in soil .....	56,250.00
Orchard treatment .....	28,750.00
Dairy investigations .....	33,750.00
Total spent in these investigations.....	\$316,250.00

In the same time the State Board of Agriculture (p. 164) spent \$96,840, and the Board of Live Stock Commissioners (p. 163) \$76,838.80; appropriation for the Association of Beekeepers (p. 613), \$2,000. The State Entomologist spent \$49,090.31, in addition to his sal-

ary for two years, or \$4,000. In the same time the expenditures for the State Board of Health were only \$79,105.56, including the salaries of all officers and employés, office and special expenses, according to page 136 of the auditor's report. (Apparently this amount does not include the expense of the board as license examiners, and I infer that the auditor does not examine these books.) The auditor's report gives other interesting comparison for those same years:

The Fish Commissioners spent.....	\$40,736.16
Besides Warden's salaries.....	8,562.50
And expenses .....	1,432.83
From the State Game Protection Fund there was spent.....	281,755.60

To protect game in the state. Total.....	\$332,487.09
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Two men from the humbler walks of life got up early one morning to catch some fish for dinner. To get bait they dragged a net a little way along the shore of broad Lake Michigan. That act cost them \$27, for they were seen by a fish warden. Aside from the preservation of the species, the protection of fish from snares and game from guns is for the luxury of the few. The protection of the life and health of humanity is a necessity for all. Reduce sickness and you reduce poverty with all its attendant ills. The Illinois Commissioners of the Louisiana Purchase Exposition gave \$2,073.48 as special awards on swine, but I find no special award on exhibits pertaining to sanitation. Are the lives and health of American citizens of so slight value in comparison with swine, or bees, or the bacteria of sour milk?

Turning now to the report of the State Board of Health for the year ending Sept. 30, 1906, we find that \$2,659.59 was spent in yellow fever inspection service, but, unless it is included in "investigations of contagious and infectious diseases and sanitary conditions," there is no record of work done to prevent typhoid and malarial fevers, either of which is far more dangerous to the citizens of the state than yellow fever. Even according to the incomplete record of the State Board, in the year 1907 there were in Illinois 1,119 deaths from typhoid and 120 from malaria, but there have been no deaths from yellow fever in this state for many years.

How long must malaria reign before a thorough crusade is made upon the *Anopheles* mosquito? How long before the state will begin a systematic search for the breeding places of the typhoid bacillus? Must the land be scourged by a disease like the bubonic plague before it begins to exterminate the rats? Especially when the losses occasioned by these rodents amount to hundreds of thousands, if not millions, of dollars annually? Is it not worth trying to exterminate also the flies which spread infection?

Is it not time that the profession urge more liberal appropriations for the State Department of Health, and demand work done in harmony with the dignity of the state and the importance of the subject? Is not every physician in the state partially responsible for the present conditions? Have we not been negligent and sleeping?



## Symposium.

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### THE CLINICAL TYPES OF TOXEMIA OF PREGNANCY.\*

JOHN G. CAMPBELL, M.D.,  
CHICAGO.

About fifteen years after Richard Bright, in 1827, described the phenomena of nephritis, Rayer announced the association of albuminuria with the convulsions which had for centuries been seen frequently to complicate the pregnant state. With this in mind it soon became evident that there existed a marked similarity between these convulsions of the gravida and those of true uremia. In fact, so nearly identical were the clinical phenomena of these two conditions that the convulsions occurring in the pregnant woman were declared by Frerichs to be simply uremic. Recognition, however, of this relationship marked the first step in the development of the modern rational conception of the pathogenesis of the symptom-complex which we to-day know under the name of the toxemia of pregnancy.

The next important step was taken when, in 1887, Bouchard advanced the theory of autointoxication and tried to prove the eclamptic condition to be due to impaired action of various excretory organs. This opened up a new field of investigation, which has resulted in a vast amount of research work, the deductions from which, while not entirely consistent, have in the main tended toward our present view. This, in the words of Ewing, classes the "toxemia of pregnancy as a functional disturbance of the liver, usually but not necessarily associated with severe anatomical lesions of this organ, and secondarily with functional disturbance and organic lesions of the kidneys and other organs." The nature of this disturbance is a failure of the liver to render innocuous certain poisonous products of metabolism during their passage through it. "Proteid derivations normally combined by the liver into urea circulate freely in the blood in poisonous form and are only to a small extent excreted by the kidneys. The exact identity of all these toxic bodies has not been established," but continental pathologists have recently found large amounts of leucin, tyrosin and lysin in the blood of women showing clinical signs of severe toxemias. Probably numerous factors are at play in the production of the metabolic disturbance, such as perhaps the retained principles of the menstrual flow, the increased toxicity of the blood from the increasing waste products of the growing fetus, or some change in the maternal organism due to an absence of the normal gestational enlargement of the thyroid gland, etc. Whatever may ultimately be established as the exact etiologic factors in this complex condition, it is much more in harmony with our modern conception

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\* Symposium on Toxemia of Pregnancy, read at Englewood Branch Chicago Medical Society.

of the pathology of the toxemia of pregnancy to believe this result will be worked out in the laboratory of the physiologic chemist rather than that of the pathologist.

Whenever I attempted, in the preparation of this paper, to classify the clinical types of the toxemia of pregnancy on a pathologic basis, which I believe to be the only rational basis, I failed signally without constant allusion to and the ultimate interlacing of both the renal manifestation of the disease and also that capstone of clinical signs — eclampsia. So, in deference to the gentlemen who follow me, I have decided to subdivide the subject on a symptomatic basis, and in accordance with this will consider a few of the chief types, one of which I would mention as the renal type with eclampsia occurring as a symptom of prime importance in this type, any other type or combination of types. I trust Dr. Bosler and Dr. Hagens will pardon this mention in my classification of the field they are to discuss.

#### HEPATIC TYPE.

Our knowledge at the present time will not allow us to go farther than to state that the etiologic factor in the toxemia of pregnancy is a disturbance of the liver function. This may depend in the mild toxemias upon minimal cell change, while in acute yellow atrophy there is practically a complete destruction of the liver parenchyma due to a granular and fatty degeneration. Herz believes there are cases showing as profound toxic symptoms as those based upon severe organic lesions which present no anatomical change. These he ascribes to an acute functional paralysis of the liver, and they are usually extremely virulent in character. Technically there is only one type of the toxemia of pregnancy and that is the *hepatic*, with all the other types, due to the prominence of symptoms from some particular organ which has especially felt the influence of the toxins circulating in the blood.

Under this head I shall speak only of acute yellow atrophy. When found in the pregnant woman this condition is considered at the present time by most clinicians simply to be a terminal stage of the toxemia of pregnancy. The pathologic anatomy of the liver in acute yellow atrophy differs only in degree from that found in other stages of pregnancy toxemias with varying clinical manifestations, hence we are led to believe that the morbid process in acute yellow atrophy is of frequent occurrence, which in many cases is followed by complete recovery. Sixty-five per cent. of all cases occur in women, and of these 50 per cent. are in the latter half of pregnancy.

The clinical entity of acute yellow atrophy is usually preceded by a prodromal stage lasting from one to three weeks and characterized by gastric disturbances, hepatic tenderness, a mild but distinct icterus and light-colored stools. The second or active stage is apt to ensue suddenly with profound prostration, almost invariably vomiting and early involvement of the cerebrum as shown by restlessness, insomnia, delirium and convulsions.

The liver becomes more tender and even painful and shrinks rapidly. The area of liver dulness may be entirely lost, due to the shrunken liver dropping away from the costal wall. In the event of a very rapid death this sign may not be present. Icterus increases and there is a constipated bowel with pale stools. The spleen enlarges in 66 per cent., although Edwards states this does not occur in cases accompanied by profuse hemorrhages or active diarrhea. The urine is diminished or suppressed. There are found in it bile pigment, albumen, casts, leucin, tyrosin, and diminished urea. The pulse becomes rapid and the temperature subnormal. Dyspnea is a constant symptom. Hemorrhages occur from the uterus and stomach and into the skin, the serous and mucous surfaces. Convulsions are present in 33 per cent. The vomiting becomes cerebral in character, the ejecta consisting of mucus, bile and blood. The tragedy ends in 85 per cent. of cases in coma and death in from two to seven days.

#### GASTRIC TYPE.

Time was when the milder forms of vomiting were considered among the physiologic phenomena of a normally developing pregnancy. When the vomiting assumed a more severe nature it was ascribed to reflex irritations from pelvic conditions either normal or pathologic. The pathologic anatomy of the liver, however, in pernicious vomiting is identical with that of acute yellow atrophy and the typical eclamptic state. Ewing sees no more reason for separating etiologically the mild and pernicious forms of vomiting than the mild and fatal forms of eclampsia, and goes so far as to assert his belief that all forms of vomiting not accounted for by previously existing gastrointestinal irritations are manifestations of varying degrees of toxemia. Surely it is the practical experience of all of us doing obstetric work that the woman announcing at the close of a pregnancy that she "never missed a meal and never felt better in her life" is usually the woman who appears in the bloom of health, whose nutrition has improved throughout and who has been free from headaches, insomnia, mental perversions and the other petty ills of pregnancy. The converse of this picture is quite as universally seen.

Edgar still recognizes a form of hyperemesis, persistent to the eighth month, not becoming pernicious in character and offering no clinical signs in these later months of toxemia. He is not willing to pronounce definitely on the nature of this clinical type, but suggests it may be due to a transitory, benign toxemia which the gravida has suffered from early in pregnancy, but from which she has fully recovered save the persistence of the exalted reflex excitability which underlies the tendency to vomit. He seems to believe with Ewing that those cases of hyperemesis which have for so long been classed as reflex in origin are instead cases of toxemia, this toxemic state producing a hypersensibility of the reflex nervous system and thus rendering it susceptible to local pelvic irritation, to which it otherwise would not have reacted.

Disturbances of the digestive tract are observed in a large percentage of all pregnant women. Slight morning nausea with or without vomit-

ing occurs in about 50 per cent., beginning about the end of the first month and reaching its maximum in the third month. This usually appears immediately on rising. There may be simply nausea and retching or actual vomiting of mucus, bile and gastric juice. The woman then eats breakfast and maintains a quiescent digestive tract throughout the day. At this point the process may become stationary. Many cases progress to a point sufficient to cause vomiting during or after one or more meals of the day. Another meal may be taken at once and usually retained so that nutrition is but little, if any, interfered with. Nausea and vomiting seldom occur alone in these cases, but they are accompanied by headache, dizziness, various mental symptoms, alterations in character, taste, perversions, constipation, lassitude, chloro-asma, pruritis, etc. These can only be considered as due to an intoxication of which the nausea and vomiting is only a still further manifestation. Relatively few cases presenting only this train of symptoms come to autopsy, but those that have here shown a morbid process in the liver differing only in degree from that found in pernicious vomiting which latter, let me repeat, is identical with that found in acute yellow atrophy and eclampsia. Vomiting of the severity mentioned usually ceases during the fourth month or about the time of quickening. This cessation is sometimes for a time followed by diarrhea, which still further emphasizes the autotoxic side of the matter and lends color to the assertion by certain observers that the vomiting is an effort of Nature toward a cure of the intoxication by rejecting all or a portion of the food and thus preventing the entrance into the system of an enormous amount of the products of incomplete action of the liver.

The pernicious type of vomiting is an advanced stage of that already mentioned. In past years this with the other types of vomiting has been largely attributed to a neuropathic basis, but recent clinicians have been so impressed with the marked similarity between the terminal stage of this affection and a similar stage of the fulminant type of toxemia of pregnancy that they began to look about for a common etiological factor. This the pathologic laboratory has done much to clear up by demonstrating to a certainty that, as I have stated several times, the morbid process in the liver in all these affections is identical.

The symptomatology is usually divided into three groups. The initial symptoms are nausea, repugnance for the common articles of food and strong abnormal cravings. Vomiting soon supervenes and is far more vicious than other forms of gestational emesis. It may occur fifteen to twenty-five times per day, mucus, bile and even blood being ejected. The nutrition of the woman is rapidly involved and emaciation, constipation and weakness occur. In the second stage we find a quick, rapid, small pulse with a dry hot skin, although the temperature is but little, if any, elevated. The gastric symptoms persist and loss of weight is progressive and rapid. The urine shows albumen, casts, leucin, tyrosin and other marks of faulty metabolism. This condition may persist for weeks.

The third stage is a terminal one, recovery rarely occurring after its train of symptoms have ensued. The vomiting is very greatly lessened or may, indeed, stop. The pulse, however, remains small and rapid and



weakness is progressive. Thirst is extreme, the extremities are cold and the abdomen is collapsed. Death usually occurs in a few days with muscular twitchings, somnolence, coma and sometimes jaundice.

#### CEREBROSPINAL TYPE.

The third symptomatic type I will term the cerebrospinal, and under this head I wish to mention a few of the more intrinsic symptoms emanating from the nervous system and due to the toxemia of pregnancy. Here perhaps should be classed the so-called fulminant type of toxemia, covering those cases of rather sudden death not accounted for by other and positive causes. Pregnancy, *per se*, as a cause of death is extremely rare. The pathology of these fulminant cases, however, has been little investigated, death often occurring before a diagnosis is made and always before any extended clinical study is possible. A most virulent intoxication is indicated by the symptoms of sudden and profound prostration, cardiac failure, anomalies of temperature, and rapid implication of the cerebral cortex which leads to an early and fatal coma. In the few cases that have reached careful autopsy the same hydropic, granular and fatty degeneration of the liver is found as the essential lesion.

The literature makes scant reference to toxemia as a cause of gestational insanity. Peterson states that 1 per cent. of all insanity in women has its inception at the epoch of reproduction. He also believes that "there are many cases of parturitional psychoses in which the insanity is not so much due to the stress of labor as to possible autointoxications from poisonous substances absorbed from the katabolic changes incident to involution of the enlarged uterus." If this be true, it would be quite as rational to assume that a gestational insanity might be caused by the far more virulent toxins of altered metabolism circulating in the blood as a result of the toxemia of pregnancy. Insomnia, neuralgia, neuritis and pruritis I would simply mention as distinct entities frequently due to toxemia and unattended by other marked clinical findings.

In the preparation of this paper I wish to acknowledge my indebtedness to Stone, Ewing and Edgar, who by their monographs and the textbook of the last have been of great aid. These men, of all other modern writers with whom I am familiar, have been the first to consider the toxemia of pregnancy as an acute disease with a well-established pathology and a definite symptomatology.

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#### ECLAMPSIA.\*

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#### DEFINITION.

Eclampsia is the occurrence of convulsions during pregnancy, labor or the puerperium, occurring at longer or shorter intervals, clonic and tonic in character, followed by unconsciousness and coma. It occurs about once in 500 cases of pregnancy and labor.

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\*Read before the Englewood Branch of the Chicago Medical Society.

## CLINICAL HISTORY.

Most frequent in primipera, about 70 to 80 per cent. Occurs usually during the latter half of pregnancy and most frequently toward the end of pregnancy; though cases have been observed as early as in the third month (Zweifel). In point of time convulsions occur (a) antepartum, (b) intrapartum, and (c) postpartum, and are most frequent and serious in the order as mentioned, excepting in 9 per cent. to 16 per cent. of the cases the convulsions are always accompanied by some functional disease of the kidneys manifested in the urine, with insufficient elimination and retention in the blood of toxic substances. The eclampsia seizures are usually ushered in by a prodromata of symptoms, but sometimes come on without any warning, and may occur in sleep.

The pre-eclamptic symptoms are physical and general mental lassitude, anorexia and sometimes nausea and vomiting, headache through temples, boring pains in the epigastrium, disturbances of vision (amblyopia, amaurosis), ringing in the ears, edema of the extremities and sometimes of the entire body, progressive diminution of the quantity of urine and urea output, with albumen and casts. These pre-eclamptic symptoms may present themselves one by one or a number or all may be present at one time when a case comes first under observation.

The convulsion usually begins with twitching of the muscles of the eyes and face, twisting the face to one side, then to arms, legs and the entire body is thrown into a tonic rigidity, eyes stare, fixed, and pupils at first contracted, later become widely dilated, soon cyanosis sets in from respiratory muscle spasm and respiration ceases. Frothing at the mouth, often colored with blood from injury to the tongue caught between the teeth, loss of sensation and consciousness are complete. The attack may last from one-half to two minutes. This is followed by stertorous breathing and coma for one-half hour or longer. Convulsions may recur at intervals of one-half hour or longer, sometimes but one in twenty-four hours, sometimes only one and this may be followed by recovery or prove fatal.

## PATHOLOGY AND ETIOLOGY.

Eclampsia is due to the circulation in the blood of some toxic substances yet unidentified which causes thrombosis of the smaller vessels of the internal viscera of the body, most characteristic in the liver, followed by degeneration and necrotic processes. Lesions are almost constant in the liver and are found in the kidneys, myocardium, brain and lungs. These degenerative changes so interfere with the metabolic function of these organs as to establish a cycle of toxemia which sooner or later reaches the limit of toleration by that particular nervous system and a convulsion results. Fetal metabolism must play an important part in increasing the work of the maternal organism in addition to the elimination of its excretory products, since clinically we see that when the ovum is removed or the circulation between the mother and ovum is interrupted, as in the case of death of the fetus, the convulsions cease.

Though albumen is absent in 9 per cent. to 10 per cent. of the cases, at autopsy most cases show renal lesions of an acute nephritis with marked necrosis of renal epithelium, probably secondary changes from the underlying cause. The unstable condition of the nervous system in most cases of pregnancy make it unusually susceptible to toxic irritation. Some constitutions seem to be particularly susceptible to eclampsia, yet it is doubtful whether individuals from neurotic families are more liable to true eclampsia than others, except in so far as they would yield sooner to a lesser degree of toxicity in the blood than others. Similar pathological changes are found in the internal viscera of the infant as in the mother in a case of eclampsia.

#### DIAGNOSIS.

The diagnosis of eclampsia is not difficult when one has had the opportunity of watching the patient during the latter half of pregnancy. In fact they seldom need to come to the eclamptic stage, if we can give the case proper treatment and care, but when it does occur it can quickly be recognized in a case under observation. It must be differentiated from (1) epilepsy by the history of the case, urinary findings, absence of edema; (2) apoplexy, (a) which seldom occurs in pregnancy, (b) no edema, (c) coma follows soon without spasm; (3) hysteria, usually conscious, no edema, no coma, usually plenty of urine, absence of pathological findings; (4) uremia, have sudden suppression of urine, marked dyspnea manifested early in uremia. Clinical observation at the bedside through an eclamptic attack is of much value to aid us in arriving at a conclusion.

#### PROGNOSIS.

The prognosis of the true eclamptic is always serious; least so during the puerperium, and yet a dangerous complication at that time. The maternal mortality is 20 to 30 per cent; fetal mortality 30 to 50 per cent. Mortality of primipara and multipara, 3 to 1; by some it is claimed there is no difference. Death may occur from the edema of the glottis or lungs, apoplexy, general exhaustion and paralysis, probably acute dilatation of the right ventricle of the heart, and aspiration pneumonia. When the pulse remains full and firm, temperature not high, the outlook is favorable; when rapid, weak and thready, and high temperature, outlook unfavorable.

#### TREATMENT.

After all we can not get away from the fact that whatever the theory advanced as a cause of eclampsia, it is the expression of inadequacy on the part of the organism; that is, the metabolic functions and eliminative processes of the body are unable to cope with the degree of toxicity generated in the system under the circumstances. The treatment of to-day must have reference to the pre-eclamptic stage and that of eclampsia *per se*. The pre-eclamptic or prophylactic treatment is along

dietetic, hygienic, and sometimes medicinal lines. When taken in time with full co-operation on the part of the patient, wonderful results may be accomplished with diet, hygiene and attention to elimination. I believe, too, little attention is often given to physical rest in bed for a longer or shorter period until all symptoms disappear. Prophylactic treatment with the patient in bed attains far better results than when up and about. While a patient will progress unfavorably when up and about, she will with the same treatment do remarkably well when put to bed.

Treatment in the convulsive stage during pregnancy or labor requires prompt removal of the product of conception, in the most conservative manner for the individual case in hand, unless the case does not seem urgent and responds well to other forms of treatment and it is desirable to prolong pregnancy in the interest of the child. In most cases labor pains set in after the convulsions. They become stronger and more rapid, so that with other conditions remaining favorable an expectant plan of treatment is justifiable until the cervix is effaced and os dilated sufficient for an operative delivery with safety. Since these patients are very susceptible to fatal shock, it is desirable to reduce manipulation and violence of all kinds to a minimum. When, however, we meet with a case in repeated eclamptic convulsions that has a tight cervix, as is often seen in primipara, the question of the mode of operative procedure presents itself. One of the following becomes necessary: (a) Manual dilatation with the hand or instruments; (b) deep cervical incisions with manual dilatation; (c) dilating with bag; (d) vaginal or abdominal Cesarean section.

Personally I believe this class of cases, when taken early, suffer far less shock and mutilation by vaginal or abdominal Cesarean section with proper surroundings where it can be performed in one-third time or less, and where the double purpose of venesection and hypodermoclysis or transfusion of normal salt solution can be performed while the Cesarean section is in progress. Though the mortality of Cesarean section in eclampsia is high, 33 to 50 per cent., it probably would have been 100 per cent in the same desperate cases had they been allowed to go on with other modes of treatment. After the ovum has been removed, diuresis, diaphoresis, the use of normal salt and even venesection should be performed if the convulsions do not subside after delivery.

#### MEDICAL TREATMENT FOR THE ECLAMPTIC STAGE.

Aside from what has been mentioned few drugs are of service, morphin and pilocarpin are mentioned to be condemned. Though advocated by some good authorities, chloroform stands first, chloral and bromids in large doses, 30 to 60 grs. per rectum. Extract veratrum viride is strongly advocated by some hypodermically, 10 to 20 drops repeated in 10 minim doses every half-hour till pulse goes down to 60 per minute. Chloroform for anesthetic. Protect tongue. Protect the patient from injury.



## CASE REPORTS.

CASE 1.—Patient a large, well developed primipara, 26 years old. Heavy eater, little exercise during the last months of pregnancy. During the last four weeks generalized edema. With prophylactic treatment this all subsided. Urine was negative each time that it was examined except diminished in quantity. Forty-eight hours before labor set in she had one hard convulsion, she was kept in bed till labor set in, four hot air baths in 24 hours, milk diet, and mild diuretics. Difficult slow labor terminated with forceps, no more convulsions; recovery complete. Since then has been confined three times. Normal delivery each time and no recurrence of any toxemic symptoms.

CASE 2.—Primipara, 24 years old, seen first in characteristic convulsions, a few hours after normal labor by a midwife who had gone home. Could not get urine for examination; when first examined no albumen or casts; made a good recovery at that time. Has had three children since, normal and no eclamptic symptoms. She is a very neurotic person, always suffering from headaches due to gastrointestinal toxemia. She had been in spasms for a whole day at a time when not pregnant, became cyanosed and unconscious at times. The last three years has had no attacks. In this neurotic individual with chronic gastrointestinal toxemia and urinary findings always negative it may have been due to the alimentary canal and possibly some liver changes.

CASE 3.—Multipara, unattended by any one, brought to the hospital in convulsions and coma. Small quantity of urine in bladder, loaded with albumen and casts. Did venesection, emptied the uterus, child was dead; patient died a few hours later.

CASE 4.—Primipara in my service at the Mercy Hospital under Dr. Jaggard, came in for pre-eclamptic treatment, which proved inefficient. Labor was induced by rupture of membranes with a steel sound, soon after the first convulsion labor came on, delivered of a premature child. Mother recovered.

CASE 5.—Primipara 30 years old. Generally contracted flat pelvis. Conjugata vera,  $7\frac{1}{2}$  cm.; between spines, 24 cm.; between crests, 27 cm.; Baudelocque,  $17\frac{1}{2}$ . Head did not enter the pelvis, head presentation O. D. P. position. This patient had some edema, diminished urine and urea output, a trace of albumen, but no casts for about three weeks before labor. The head did not descend until about three hours before she was delivered; she had been in comparative hard labor for about eight hours when suddenly she went into convulsions, about one-half hour later a second one. At this time the os was sufficiently dilated to assist with forceps. Before delivery patient was catheterized, secured one ounce of very dark, heavy urine loaded with casts, blood-cells and three-quarters albumen by quantity. The R. O. P. was rotated anteriorly, forceps applied and delivered in a comparatively short time with laceration of the first degree. She made an ordinary recovery, nurses the baby and both are well.

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## TOXEMIAS OF PREGNANCY, RENAL INSUFFICIENCY.\*

ARTHUR G. BOSLER, M.D.

CHICAGO.

In considering the part renal insufficiency plays in the toxemia of pregnancy it is necessary to review very briefly the functions of the kidneys. This function, tersely stated, is to form urine. Sometimes this is spoken of as a secretion, but inasmuch as its constituents pre-exist in

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\*Read before the Englewood Branch of the Chicago Medical Society.



covered that urine of dropsical patients was coagulable by heat, and while it is true Wells (1806), Blackall (1816), and Allison (1820) wrote upon the subject, it remained for Richard Bright to give us the first insight with the true nature of non-suppurative disease of the kidneys, which he did in 1827, and subsequently Bright demonstrated the dependence of dropsy and albuminuria upon disease of the kidney, describing accurately the lesions and the phenomena of nephritis. A few years later, 1840, Rayer announced his discovery that eclampsia is preceded by albuminuria and the inference of kidney involvement. This recognition may be said to mark the starting point in the establishment of the theory of the toxemia of pregnancy. The convulsions which for ages have been known to menace the gravida were considered as closely connected with uremic convulsions; indeed, Ferrichs looked upon eclampsia as being simple uremia due to retained waste products. In 1840 Pokitansky described the lesion of acute yellow atrophy of the liver, and Ferrichs was one of the first to observe that a large proportion of cases occurred in pregnant women and established the fact that a secondary toxic state, termed by him acholia and by some cholemia, had a special attraction for the gravida.

To Ferrichs and Karl Braun is given the credit of pointing out the relationship between eclampsia and liver lesion by the recognition of the fact that in some cases the kidneys are normal and that in these cases the liver is the seat of the destructive lesions. Modern investigations have shown that the liver is seldom or never free from alterations in eclampsia, these varying in intensity from normal changes to acute yellow atrophy itself, and this line of research has terminated in the modern claims of Jurgens that hemorrhagic hepatitis is to some degree characteristic of eclampsia. To Tarnier is given the credit for the announcement that the liver almost invariably undergoes some change in all gravida, a fatty infiltration of the parenchyma. Williams has found marked liver changes in all of his recent autopsies of eclampsia, some seventy-four cases. It was originally supposed that the gravida was unduly susceptible to Bright's disease, and eclampsia looked upon as being of renal origin. The specific character of the kidney of pregnancy was recognized by von Leyden in 1886. He pointed out the fact that the anatomical changes are not inflammatory but rather degenerative, the renal epithelium undergoing a fatty infiltration, with subsequent degeneration and regeneration. The degree of involvement varies, and it may be complicated with nephritis, which affection may have antedated the event of pregnancy as subacute nephritis may first become manifest during pregnancy and by an acute exacerbation cause true uremia. An acute nephritis, as in scarlet fever, may develop upon a pregnancy kidney and confusion result as to whether it is a case of simple uremia or eclampsia. Undoubtedly such cases of a true nephritis have been reported as due to pregnant kidney.

Chronic interstitial nephritis—contrasting kidney, the very kidney lesion which in time invariably produces uremia, seems to be a little

affected by pregnancy, and only in a very small percentage of cases do pregnant women so afflicted develop convulsions. This fact has done much to convince observers that a radical difference exists between simple uremia and eclampsia. Uremia develops as a result of sudden suppression of urine or when the parenchyma of the kidney has been slowly destroyed. Eclampsia develops when the pregnancy kidney has reached a certain degree in the degenerative course and thus far agrees with uremia. But eclampsia is known to occur when the urea output is still normal, when no albumen or casts are found in the urine, and in cases in which the kidney showed no lesion, or so slight as to be of no material consequence. As to the urinary findings, these are so varied as to discourage any classification. The total solids is usually decreased, the urea output being often very low. The amount of urine is decreased. Albumen is often present, but in only a small percentage of cases showing albumen does eclampsia occur. Williams, in a paper on the "Toxic Vomiting of Pregnancy" states, "the urine, while diminished in amount as the result of scanty intake of fluid, does not contain albumen or casts until shortly before death, and may apparently present a normal amount of urea, as determined by the Doremus method, so that its casual examination gives no clue to the gravity of the condition. In reality, on the other hand, more detailed chemical examination at an early period reveals changes which are indicative of a profoundly altered metabolism. These consist of a decided decrease in the amount of nitrogen excreted as urea and a marked increase in the amount put out as ammonia. Accordingly, while the total nitrogen eliminated as ammonia is greatly increased, and this so-called ammonia coefficient, instead of being 4 or 5 per cent., as in normal pregnancy, may rise to 20, 30 or 40 per cent. In my experience if the latter (ammonia coefficient) exceeds 10 per cent. the diagnosis of toxic vomiting should be made and the pregnancy immediately terminated, as there is no likelihood that the process can be checked by therapeutic measures if it once leads to the production of characteristic hepatic lesions. Edgar states that, "The kidney is affected in pregnancy by lesions which stop short of actual nephritis." Another author states that, "An acute inflammation of the kidney cannot be caused by pregnancy." Edgar and Williams both hold the opinion that the pregnancy kidney is in all probability a mild product of toxemia. These facts suggest the theory of a circulating poison which is capable of first injuring the kidney and compromising its function to such an extent as to cause more or less suppression of urine, and many of these circulating poisons can cause a condition resembling uremia without any apparent injury to the kidney.

#### CONCLUSIONS.

1. Uremia and eclampsia are separate and distinct conditions, uremia implying a permanent discontinuance of renal functions and leads to fatal termination; eclampsia is not *per se* fatal and recoveries are frequent and the changes of pregnancy kidney undergo resolution with complete recovery.



2. That pregnancy does not produce a true nephritis.

3. That the pregnancy kidney is an acute fatty infiltration, is a secondary consideration, due in all probability to the underlying toxemia.

4. That kidney involvement with insufficiency as an etiological factor in the production of toxemia and pregnancy has been overestimated.

5. That hepatic insufficiency is more important and liver changes are more constant and characteristic than renal, and that both depend on the underlying toxemia. The exact nature of this toxemia is not known, and many theories have been advanced in explanation. To me there seems to be two factors: first, predisposing, and, second, exciting of the predisposing factors should be mentioned individually with all the term implies, heredity, diathesis, etc., the liability of the individual to disarrangement, function or otherwise, of certain organs of the body, especially the liver.

Whatever the underlying predisposing condition in the individual, the exciting cause seems to be in the impregnation of the ovule. With the growth of the ovum there is a marked change in the metabolic processes of the body; increased activity of various organs, especially the liver. This occurs in all gravida and is physiological. In any given case these physiologic changes, passing beyond a certain point, become pathologic. The liver, governing in a great measure the process of metabolism, is usually an overworked organ, and in pregnancy has an added burden, not only of increased metabolism on the part of the mother, but to care for the nutrition and waste of the fetus as well. It is reasonable to presume that this excessive stimulation can and does lead to structural changes seriously impairing the hepatic function. As a result we have perverted metabolic products, which I believe constitute the basis of the toxemia.

# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF THE ILLINOIS STATE MEDICAL SOCIETY.

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JANUARY, 1909.

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## THE DIVISION OF FEES.

Our correspondence columns will show that considerable interest has been aroused by the discussion of this topic, which began in the November issue of THE JOURNAL.

Owing to the large number of communications which appear we have decided to postpone editorial comment on the subject until a future issue. Our only contribution to this discussion will be the insertion of a translation of a letter from Paris to the *Deutsche Medicinische Wochenschrift*, which shows America is not alone in the consideration of the evils mentioned.

For our February issue we invite still further consideration of this topic on the part of our readers, as we believe that the time is ripe for some fair decision on this subject.

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## DR. PETTIT'S VISIT TO LOCAL SOCIETIES.

J. W. Pettit, M.D., President of the State Medical Society, has been visiting the various county medical societies, and up to Dec. 22, 1908, has addressed the members of the profession in fifty-five (55) counties of the state. His first care has been the smaller and more poorly organ-

ized counties. These he found in the southern part of the state, and great interest has been raised in the profession and it is believed that great good will result from Dr. Pettit's visits. Dr. Pettit expects to go to southern California, January 1, for his six weeks' or two months' rest. Upon his return he will resume the work of visiting the remaining counties in the state and hopes to complete this task of visiting every county before the meeting of the State Society.

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### SANITARIUM FOR TUBERCULOUS WOODMEN.

The Modern Woodmen of America, a fraternal insurance society with headquarters at Rock Island, Ill., has established an up-to-date sanitarium, the tent colony plan being employed, on a tract of 1,380 acres situated seven miles from Colorado Springs, Colo. The first patients will be admitted Jan. 1, 1909, to the number of sixty. Only those who are curable or whose lives may be prolonged for a certain length of time will be admitted as patients. As there are 13,000 local camps and over 1,000,000 members, it will be seen that this movement is destined to reach a very large number of people. The society believes it will be a good business proposition as well as good fraternalism, and as the members of the Illinois State Medical Society are frequently called upon to treat members of this order, it will be well for them to remember the provisions that have been made for the free treatment of these persons.

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### THE SEVEN CLASSES OF NOSTRUMS.

Secret nostrums, proprietaries or patent medicines may be divided into seven classes for the sake of convenience:

1. The peddler's patent medicine, often composed of harmless infusions, linseed oil, etc., made by people generally too poor to pay for a printed circular, and peddled from house to house.

2. The ordinary patent that lines one whole side of a druggist's storeroom, sold by newspaper and window displays, and whose virtues in many instances reside in the amount of money spent for advertising.

3. The . . . Chemical Company's specialty, of the type so numerous and whose composition consists of those new fancy named chemicals and scientifically extracted new proximate principles.

4. The various acetanilid and coal tar preparations that come from no one knows where except the manufacturers.

5. The newer form of patent prescription medicines, of the kargon, oil of pine, barkola, spirene type.

6. The struggling pharmaceutical manufacturer's full line of specialties, whose claim of imitation is so loud and who tags a new name on to every U. S. P. or N. F. preparation that he thinks will sell.

7. Last, but not least, comes the rich manufacturing houses' strictly scientific and other specialties.—*The Journal of the National Association of Retail Druggists.*

## HEALTH IN CHICAGO AND THE DRUGGISTS.

Recently *The Chicago Tribune*, in bold type, proclaimed that the condition of public health was driving druggists out of business. As the same condition would deprive physicians of a living, we were much interested in obtaining the truth of the statements. *Notes*, the journal of the druggists, in reply calls attention to the fact that all druggists quitting business, as stated in *The Tribune*, were located in the south side of the city and was confined to dealers endeavoring to conduct more than one store. While health conditions are certainly excellent in the city, yet druggists who attend strictly to business are enjoying a good degree of prosperity. Conditions have been much improved by the propaganda in behalf of official preparations and against nostrums and to the abandonment by some physicians of the self-dispensing habit.

As *Notes* says, "the real moral of *The Tribune* 'scare head' should be that a druggist should have one place of business and stay with it." The same argument usually applies to medical men. We will add that if the druggists would abandon the counter-prescribing habit as physicians are abandoning the dispensing habit, both professions and the health of the people would be the gainers.

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TEXAS EXAMINATION.

Dr. M. E. Daniel, secretary of the Texas State Board of Medical Examiners, of Honey Grove, Texas, requests us to state that the regular semi-annual examination of that board will be held in Cleburne, June 22-24, 1909. Further particulars may be obtained by addressing the secretary.

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A MEMORIAL TO DR. JOHN H. RAUCH.

In Lebanon, Pa., Sept. 4, 1828, of good Pennsylvania Dutch stock, was born a boy who, taking up the study of medicine and graduating at the University of Pennsylvania in 1849, before he was 21 years of age, was destined by his own native ability to make a large impress on the history of the country. It is sadly true that the benefits his efforts bestowed on the people are not known and appreciated by the general public. Even the profession which he did so much for is only now waking up to a sense of their obligation to this man. It was the privilege of the writer, as his assistant and later as a member of the State Board of Health, to be intimately associated with him for more than a dozen years and thus to gain a knowledge of his sterling character which is possessed by few of those now living. A relative, Dr. S. D. Carpenter, retired, of Chicago, now in his eighty-third year, was a classmate; he located in Iowa about the same time and was intimately associated with him before, during and after the war and has given us many details of his life.

Dr. Rauch located in Burlington, Iowa, soon after his graduation, where his devotion to the science and art of medicine and botany soon brought him into prominence, and about 1858 he was called to a chair in



the Chicago Medical College. The breaking out of the war was Rauch's opportunity for experience in sanitary matters and for a knowledge of the delinquencies of the medical profession. He soon rose to great prominence in military circles and his services were appreciated. He was medical director of the Army of the Potomac under General McDowell and of the Nineteenth Army Corps under General Banks. Soon after his return to Chicago the office of commissioner of health for this rapidly growing community was created and Dr. Rauch was installed in the office. Here he rendered valuable service in securing a good water supply, in establishing a sewer system and in organizing park districts.

He was largely responsible for the passage of the state law of 1877 establishing a board of health and regulating the practice of medicine. He was first elected president, and when it developed that the active executive officer was to be the secretary he assumed that office. For a period of fifteen years he gave his whole time and attention to this work. The work of the board as directed by him, and made known to the world by the annual reports which were regularly issued, at once aroused national and international interest. For many years all American states looked to Illinois and Rauch for relief from prevailing abuses. When the writer made his first trip to Germany in 1885 he found that Rauch's name and work were well known there. Dr. Paul Börner, founder and editor of the *Deutsche Medicinische Wochenschrift*, said: "Illinois is a well regulated state—the only one in America."

There never was any compromise with quackery on the part of Dr. Rauch. His constant fight against this gentry finally cost him his position, but this made no difference with Rauch. He would have fought charlatans if it had cost him his life. The writer can never forget some of those contests with quackery. One day after the state had been free of medicine shows for years an "Injun Doctor" set up his tent and gave a parade through the streets of Springfield. The wags, knowing Rauch's hatred of quacks, made the doctor's life miserable while the faker remained in town and dispensed his "King of Pain." "The K. & K. Specialists" registered in January, 1884, at one of the local hotels and filled the newspapers with flaming advertisements. Their swindling schemes were promptly attacked by Rauch, with the result that they soon left the state.

In 1886 the McCoy case, and later the Brinkerhoff case, came up, both of which were destined to give Dr. Rauch a great deal of trouble. These people managed to interest a number of influential attorneys and citizens and a vigorous fight against the action of the board was instituted. The board received very little, if any, support from the medical profession. The profession was entirely unorganized and the board received absolutely no assistance in its contest with these parties. As a result influences were brought to bear which forced Dr. Rauch from the office in 1891. Had the present organization of the profession then prevailed no such injustice could have been perpetrated. This cruel blow broke Dr. Rauch's spirit, and after remaining in Chicago for a short time he went to his boyhood home in Pennsylvania.

In the early eighties a severe epidemic of smallpox threatened not only Illinois but the whole country. With the assistance of Dr. F. W. Riley and a staff of helpers, clerks, etc., a campaign was organized which saved the nation thousands of lives and millions of dollars. The quarantine regulations of the Atlantic seaboard ports as they stand to-day are largely Rauch's work.

In 1892 Dr. Rauch had charge of the quarantine station established at Sandy Hook by the national government. In 1893 he helped organize the State Board of Health in Pennsylvania, which was modeled after the Illinois organization. By this time Dr. Rauch's health was rapidly failing and his activities were necessarily much limited. On March 24, 1894, he was found dead in his bed at Lebanon, and thus quietly passed away a man whose stature as a sanitarian and benefactor of the people and the medical profession will grow as the years pass on.

Dr. Homan of St. Louis has proposed (and others have seconded the proposition) that some suitable memorial of Dr. Rauch be erected in Chicago. Of course the organization to take hold of this matter would be the Illinois State Medical Society, and we hope that this proposition will meet with immediate response from the members of our organization.

It has occurred to the editor to suggest that when the new John Crerar Library is constructed probably some arrangement might be made by which a bust of Dr. Rauch should find a prominent place in the medical department of that structure, which, as we understand, will be largely given over to medical and scientific works. Certainly by this or some other suitable memorial Dr. Rauch's great work should be recognized by our society.

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## Correspondence.

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### MEMORIAL TO DR. RAUCH.

LEBANON, PA., Dec. 13, 1908.

DR. GEORGE N. KREIDER, Springfield, Ill.

*My Dear Sir:*—Yours of the 9th inst came duly to hand. Am pleased to say that I am the brother of the late Dr. John H. Rauch, whom you met at Decatur, Ill., and highly gratified that even at this late day a movement is being started to erect some suitable memorial to his memory that shall in some measure be a tribute to a man who sacrificed health and pecuniary consideration to public sanitation and to advance the standard of medical education. Egotistical as this may sound, I was in close touch with him from my early boyhood days to the morning I found him dead in one of the rooms of my house, and, as executor of his estate, I acquired information that fully justifies me in saying that even prudent forethought for the eventide of his life, as he was approaching it, was subordinated to his lofty professional

ideas, and the ever-present thought in his mind—the improvement of public health through the medium of preventive medicine. The latter part of his life, although showered with honors from all sources and sections, gratifying as they were, recall even now emotions that words fail to express. “Devotion to duty” as he saw it was his motto. His remains rest in a family block in Mt. Lebanon Cemetery, a beautiful, elevated spot overlooking the city of Lebanon, Pa. This is surmounted by a family monument with inscription, “Rauch.” His grave has a marker with his name, date of birth (Sept. 4, 1828), died March 24, 1894.

To erect a suitable memorial here, I do not think would be feasible, as there is a sister buried right next to him. When at Decatur I was informed that a memoir of his life was to be gotten out by Dr. Reilly, of Chicago. But I saw him and he said he could not do it. Later on I was informed that one of the new parks was to be named after him, as he was the father of the system of public parks in the city of Chicago.

I recall reading a pamphlet he wrote on public parks in Chicago many years ago and know he was greatly interested in them. The naming of one after him and the placing of some sort of a pedestal therein or in one of the older parks suggests itself to me as a tribute to the great work he did as secretary of the Illinois State Board of Health. This, however, is to be regarded only as a hint. I saw the article in *THE JOURNAL* written by Dr. George Homan, of the Missouri State Board of Health. This will be replied to by one of his old friends of this city, Dr. Wm. M. Guilford. We will be pleased with whatever shape this matter may take even at this late day, and if I can be of any service to you or the gentlemen who may take charge of it command me.

Yours very truly,

CYRUS G. RAUCH.

### A PIONEER IN THE FIGHT AGAINST QUACKERY.

ST. LOUIS, MO., Nov. 23, 1908.

*To the Editor:*—“The Department of Medical Education and State Boards of Registration in *The Journal*<sup>1</sup> is one of the highest interest and importance; and, in looking over the contents, I have more than once thought that the prime mover in the great undertaking for better things which this department evidences did not receive during life that full recognition at the hands of the medical profession which his achievements deserved. Nor has this acknowledgment been publicly made since his death.

“I refer to the late Dr. John H. Rauch, secretary for many years of the State Board of Health of Illinois, who, in all matters pertaining to medical education in America, was a pathfinder, pioneer, waymaker, one who fought the good fight for honesty and thoroughness in medical teaching and training with such persevering firmness that the fruits are now being gathered throughout almost the entire length and breadth of this continent, and whose well-earned fame can in no wise be dimmed through the luster gained by those who may come later.

“As secretary of the State Board of Health of Missouri for a period

1. Copied from *The Journal of the American Medical Association*, Dec. 5, 1908.

concurrent with a part of the public life of Dr. Rauch, I was in sympathetic official touch and agreeable personal relations with him, and can testify to the friendly aid often extended to clear up the new and difficult questions that arose with respect to the standing of schools, dealing with advertising frauds, examination and licensing of medical applicants, and the like.

"Where the body of Dr. Rauch was buried is not known to me, nor whether the spot is marked by any memorial adequately showing the vastness and value of his work to the public and the profession; but, in view of his life and labors, the question may be asked whether it is not a serious obligation resting on the organized profession of Illinois to take the lead in a movement to raise in some appropriate place a memorial in marble or bronze that shall signify to later generations his rightful place in the great struggle in which he was the chief leader, censor medendi, pontifex medicus.

"The evidence of his worth and work should appeal to every reputable medical college now extant in the land, for in testimony of his merit may be shown the graveyards where a host of fraudulent concerns were buried through his energy, pluck and ability. Therefore, such medical schools and the various state sanitary and licensing boards should welcome the opportunity to aid in forwarding a movement to render a fit tribute to the memory of a man whose services were fundamental, beneficent and of enduring value to the welfare of his fellow-men.

"GEORGE HOMAN, M.D."

## AN INQUIRY ABOUT MEDICAL LEGISLATION.

*To the Editor:*—In commenting upon the "Urgently Needed Medical Legislation in Illinois," Prof. G. W. Webster (vol. xiv, No. 6, page 683), says in part: "Its chief weakness lies in the fact that it (medical law of Illinois) provides for voluntary registration of deaths." Is the same thing true regarding the registration of births? If so, are we to understand that such registration is optional; and, if so, of what avail is the attachment of a penalty of \$10 to \$100 or thirty days' imprisonment, or both? Light thrown upon this subject will be gratefully received.

W. W. KUNTZ, M.D., Liberty, Ill.

## DISCUSSION OF THE FEE QUESTION.

MALTA, ILL., Dec. 6, 1908.

*To the Editor:*—If division of surgical fees was to become general it would endanger the moral standing of the medical profession. Certainly few doctors want their patrons to know they are financially benefited by sending them to a specialist. If the practitioner felt that it was perfectly legitimate to take a rake-off, he would have nothing to conceal. He is supposed to charge what his services are really worth, and is practicing deception when he does not accept such fee as his entire pecuniary



reward. When we send patients to specialists, we do it more often for the patient's benefit; sometimes for our own, as we recognize in the specialist a person, by equipment and environment, more capable in his line than we. If he is what we would have him to be, why ask him to place us upon the list as paid solicitors?

Divisions are more easily obtained from surgeons of little note and less skill; hence are pernicious in lowering the standard of skill. High-class surgeons are, as a rule, high-minded men, appreciative of the physician's patronage. If their patrons are honest, the worthy poor are as well looked after as the well-to-do.

There is always a reason for a doctor occupying a high plane in his profession. If we admit more mental development along certain lines to be the cause, why ask him to recompense us who, from lack of effort, have not reached his degree of proficiency? The country doctor is a very useful member of society, providing he begins upon a good foundation, is endowed with good common sense, is a keen observer, takes into consideration what others say upon a subject, then comes to a conclusion of his own; he then becomes an indisputable factor, but he should not expect pecuniary reward from some one else's higher attainments.

L. E. BARTON.

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#### FURTHER DISCUSSION OF THE FEE PROBLEM.

*To the Editor:*—Some time ago, in response to an invitation in your editorial columns, addressed to the profession of Illinois, I wrote you a personal letter, not intended for publication, calling your attention to certain conditions which, in my opinion, were of serious detriment to the profession and danger to the people whom we as a profession have always been striving to protect at expense to ourselves and in face of bitter opposition from our proposed beneficiaries.

As a body we have secured the passage of laws against the wishes of the people and with no thought of our own interests until at the present time the most accomplished physician in this state, if he be so unfortunate as to have begun the practice of medicine prior to the enactment of the latest legislation governing physicians, is a malefactor if he crosses a state line and endeavors to perform any of the functions of his calling, and nothing can help him. As individuals we have sought to do the best for our patients, often against their own desires and always at a pecuniary sacrifice to ourselves.

This statement I believe to be true, and with respect I bare my head in spirit to the average medical man, whether he be devoting his entire time to surgery in the hospitals of a great metropolis or whether in the necessary performance of his duty the most of his time is spent in earnest contemplation of the anal orifice of his overworked horse.

My letter slandered no one. I did not suggest that any one be robbed of deserved earnings. I did not say that surgeons charged too much. I described conditions as they exist in my limited sphere of observation. I told of physicians around me who, under no circumstances, would permit a surgeon to be called in consultation, and this, by the way, is no

greater error of omission than the error of commission we see in the thousands of nephropexies, hysteropexies, curettements and ovariectomies which have been done often without sufficient warrant in the name of surgical science. Again, I described physicians who only called surgeons whom they could depend upon to operate without question and accept a small fee in cash.

I failed to describe the most dangerous of all of whom I have personal knowledge, and that is the young graduate who with a tea kettle and a coal miner's wash-pan will undertake any operation from a cholecystectomy to a hip-joint amputation. And they are not to blame. Their patients do not all die and they only do what they have been taught to do.

In securing my medical education, I do not remember having been advised to seek counsel or assistance in but one condition, that being the performance of a necessary abortion. On the other hand, I distinctly remember being told by a great surgeon, if a man had a pain in his belly, to cut him open; if a woman had certain pelvic conditions, to do a Cesarean section. I then described my own experience in which, because I knew masters in all the specialties, who could serve my patients better than I could in the immediate operation, but not before and after. I had turned over to other men work which paid them in the last ten months more than \$1,800. These patients, almost without exception, were drawn to me by my previous service to them and to the community. They depended upon me for guidance and care before, during and after operation and never heard of the specialists, all of whom are distinguished in the profession, whom I called to help me and them. In each instance I suggested to the specialist the largest possible fee I thought he could collect, because he earned it, and I waited for my own money so that specialist and nurse could be promptly paid. And, truly, when it came time to pay my own little bill at the rate of \$1.50 a visit, it seemed to me and to the patient that the service had already been compensated for sufficiently.

I expressed the hope that the better element of the profession would discuss this matter and arrive at a just conclusion in regard to fees and the relation between the general practitioner and the specialist. Not only that I might keep at least a part of my own, but that self-interest or some other influence might be brought to bear to force these other types I described to seek the assistance of competent specialists, and thereby the profession be lifted to a higher plane of usefulness and many lives be saved. I said if a just fee were asked and it were equitably divided, I, for one, would have no objection to making it public, but there would be few people who would take the trouble to ask.

I wrote my letter because I had grown weary of the tirades directed by the surgeons against the general practitioner, holding him up as a menace to the people and as a thief. I had not heard or read one word which in any way showed an understanding of existing conditions as I saw them.

My letter was published at the same time as a most sensible and con-

servative article by Dr. Reid, of Jacksonville. In the next issue of THE JOURNAL there appeared a letter signed "Lege," discussing the subject from the standpoint of the surgeon. I did not feel that there was any occasion for me to write more, although "Lege" classed me personally, by implication at least, as among the undesirable, if not dishonest, members of the profession, and he drew a picture of himself as a typical surgeon which entitles him to sympathy. But I do not think his experiences are altogether like those of other surgeons of mature experience. It is admitted, I think, by all that the American surgeon occupies an enviable position and is truly lord of creation in one particular sphere. But the president of our state society, in an address in East St. Louis, admitted that there were two sides to this question and advised me to read the letter of "Lege." Thus he gave it official recognition, and I then thought I could, in justice, ask you to publish a little more from my pen.

"Lege" says he is brought to write because no one has been willing to discuss this question from the standpoint of the surgeon. I, on the other hand, although a constant reader of the state and national journals, have not seen it discussed from any but the surgeon's standpoint. I would refer him particularly to an article by Dr. Bayard Holmes, published several years ago in this journal, which, even though unintended, was an insult to every general practitioner in the state. That is one of the strange things about this subject. The very thought of thus losing his virtue makes the surgeon wild and he immediately denies that the general practitioner is worth anything for any purpose. "Lege" says this plainly.

I have known a surgeon to charge \$5,000 for making a few incisions on a dying man and general practitioners rush into court to help him collect his fee. He earned this sum because of the skill and responsibility involved. What! Oh, what of the skill and responsibility of the general practitioner who caused this particular surgeon to be called into the case? "Lege" tells us he made lots of money when he was a general practitioner and, now that he is a surgeon, he works equally as hard, is up at night, and drives over country roads, and now does not make enough to pay back the money borrowed and spent to acquire surgical skill. Now is that not unusual?

He says when he was a general practitioner he had sense enough to know he did not have the requisite skill and experience to make him worth much as an assistant. I would like to call attention to the youth and inexperience of the average regular assistant and anesthetist to the average surgeon.

This doctor tells us that he is now risen to the place where the incompetent operator calls him in order to escape the blame for his own mistakes. He speaks of this as though it were a gracious act peculiar to surgeons. I have rendered this service many times in both medical and surgical cases, and I thought I was only doing my duty. If he can show me I am not under obligations to assist a less competent brother

out of his difficulties and help him keep patrons who ought to be mine, I can increase my income much more than by any possible division of fees.

He threatens to go back into general practice—a privilege which is his and yet would render him less useful to suffering humanity. It must be admitted that with his whole energies devoted to surgery he can do better surgical work than in the intervals between calls to obstetrical and diphtheria cases.

If he must go back into general practice, I must go forward into surgery where I will be more useful to the public. I have the ability to prepare myself to do all the surgery necessary among my patients, and I can no more afford to curtail my income for idealistic reasons than he can.

He says the general practitioner thinks he has a mortgage on every individual who consults him. Some general practitioners have a mortgage based on confidence on nearly every individual, and it is sufficient to enable him to divert the patient into the hands of the surgeon whom he prefers. The Doctor says he is asked to give one-half or two-thirds of his fee for no service rendered, that the general practitioner has not the courage to charge for his work, and that it is easier to grab ill-gotten money from the surgeon than to earn it. The general practitioner has the courage to name the size of the surgeon's fee and oftentimes to help him collect it in court.

Prices for medical services are fixed by popular consent and honored by time. With the hordes of struggling young men turned out from our colleges it is strange we can hold prices at the old standard. The surgeon renders no help in educating the public to an appreciation of the value of the services of the general practitioner. On the other hand, surgical services are new to the people, and general practitioner and surgeon alike join in teaching the patient that the price is cheap and must be paid at once.

Yet in a condition where both medical and surgical services are required, the surgeon claims it is dishonest for him to collect the whole bill and pay the general practitioner, or to let the general practitioner collect the whole bill and pay him, or to put his name jointly on the bill with that of the general practitioner and divide the fee. He declines to itemize his bill, but insists that the general practitioner shall itemize his. The surgeon calls all these plans thievery. I saw a patient (not my own) not long ago pay \$300 for a trachelorrhaphy.

Let us see the surgeons collect their bills without the moral support of the general practitioners!

"Lege" says he is weakening a little and thinks of hiring a general practitioner by the month and thus establish a medical department-store. Welcome the day! Just about that time we will establish a medical department-store in St. Clair county and we will have no trouble in hiring good surgeons. I have heard of three who give liberal commissions.

When I began the practice of medicine a surgeon who lived and died



honored by the profession and people of Illinois invited me to bring my poorer surgical patients to him to be operated on free of charge, and for those who were able to pay he said he would allow me a commission of 25 per cent. on all fees collected. I did not take advantage of his offer and only now begin to realize how narrowly I escaped being the instrument in the hands of Providence for corrupting the morals and robbing the purse of an honorable surgeon.

"Lege" says with evident glee that the public is learning about medical graft and will soon cease to pay middle man's profit. It is always desirable for the public to learn, but when we teach them that the general practitioner is worth nothing they are apt to learn at the same time that the surgeon's services can not be worth \$150 an hour.

General practitioner and surgeon look a good deal alike to the dear people. But are we really as bad as the surgeons seem to think? Does our record speak nothing but corruption and incompetence? I think we want a better understanding and a closer union. We want to wipe out abuses, we want to give the people the best service within reach and we do not want to enter into collusion.

I wanted a new carpet last October, and my dealer, who has had little experience as a merchant and has only a few thousand dollars invested, could not sell me what I needed, and he sent me to a great carpet palace in St. Louis, where hundreds of thousands of dollars are invested in carpets and much mental energy expended in selling them. I selected my carpet and it was sent to my local dealer. He put the finishing touches on it and laid it on the floor and I paid him for it. I am sure he made something out of the transaction, although I did not inquire how much. I certainly did not think he robbed me or the bigger carpet man. All of us are satisfied with the transaction.

But he is not engaged in our high calling and is governed only by ordinary rules of honesty and fair dealing. He does not serve humanity as we do. He only buries the dead and helps along the good work of the stork by supplying household goods on credit to newly-wedded pairs.

I called on Mr. Lawyer the other day. He holds a county office and is quite as much respected as an honest man as any doctor hereabout. I noticed in his last important legal case he had associated with him the celebrated attorneys, Blank and Bustem, from the nearest city. I asked if he paid Blank and Bustem or if they rendered a separate bill to the client. He seemed surprised at the absurdity of the last question until I explained that doctors do that way. He said he hired them and he paid them. The client, according to his view, was his. He said B. and B. would not think of rendering a separate bill, and it seemed to me neither foreign attorneys nor client considered themselves robbed. But these gentlemen are governed by different standards of honor. They do not inhale our sacred atmosphere or worship our golden calves.

I must not close, if my letter is to be published, without a word about those good men and true who have helped me and my patients in our hours of need. If I am to be classed as a dangerous and corrupting member of the profession, I do not want my friends to suffer by associa-

tion with me. Not one of them ever offered me a rake-off, and not one will ever be asked for a penny under whatever name. I selected them as my advisers because of their ability and integrity, and I do not believe I am different from the great majority of practitioners when I affirm in truth that no offer of a commission would tempt me to divert one patient to any other specialist.

J. H. FULGHAM.

Dec. 17, 1908.

#### COMMENDATION OF "LEGE'S" CONTRIBUTION.

*Dear Doctor:*—I have read with both interest and profit your most excellent letter in the current issue of the ILLINOIS MEDICAL JOURNAL.

One difficulty with which I meet you failed to mention. I have been limiting my practice in my special line, nose, throat and ear, for the last twelve or fifteen years. For a few preceding years I mixed special and general work, life insurance examinations being the last surrendered.

Since limiting my practice a very large per cent. of my patients are referred by other physicians to me, and a considerable number of those who come through old patients I have treated have their own family physician. In neither case can I feel privileged to refer any of these patients to either surgeons or specialists in other lines when such services are required; hence I can not reciprocate by referring patients to those who have sent me business—at least only to a slight degree—as I have no general practice upon which I can draw for this purpose.

Being located in one of the smaller cities, as you state, you do not have the free clinic trouble to contend with. DR. EDWIN PYNCHON.

Chicago, Dec. 5, 1908.

#### THE FEE-SPLITTING PROPOSITION.

CHICAGO, Dec. 15, 1908.

*To the Editor:*—I have followed the discussion in regard to the fee-splitting proposition for some time. I do not propose to write on the topic in a serious mood, because that would tend to dignify the money question and, therefore, will never do for persons engaged in a pursuit as serious as ours. To my mind, some of the letters written on this subject are pathetic, some are serio-comic. I do not believe the affair will ever be handled in an unbiased manner until an artist of the George Ade temperament undertakes to settle it. The public cares little for debate along this line; it does no good and is only a source of friction among ourselves.

I have received the impression from some of the epistles which appeared in THE JOURNAL that there are two classes of men responsible for this tempest in a teapot. Those men represent the two extremes of professional ability; they are, in a measure at least, necessary to each other; hence should come to some amicable agreement and not make so much noise about it. The average man who does his own work views the scene with equanimity. The first is the master surgeon of large

renown. He is a business man as well as a surgeon. He has invested in medical college stock, sometimes owns the whole plant, is on the staff of every hospital of importance in town, spends hours of his valuable time teaching the budding medical tyro, attends every medical meeting he can reach and reads a paper, employs a literary corps to assemble his copy and look up the extensive bibliography of the subjects of his learned research, and finally bought stamps and paid for reprints to send to the less favored brother who has not the ambition to pursue this line of endeavor for himself. He does all this and many more things, not for gain—perish the thought—but for the good of humanity; to enlighten the fellow who never reads medical literature except P. D.'s almanac and the said reprints. The follow-up system is brought into play; two or three copies of surgical essays per year are sent to the doctor. Sometimes the subjects are new; often, like Bier's treatment, they are resurrected relics of a by-gone age burnished with classic verbiage and fired at the unsuspecting practitioner.

Finally, in the town where the doctor lives, who has been receiving all this information free, dwells old Mr. Reub, the wealthy planter, who loses the hard potato he has carried for years as a preventative of disease; he becomes very ill with some complaint that puzzles the attending medical man. Jealousy, conceit or egotism forbid the doctor from calling in a local man who could befriend him in his trouble and not steal his patient, either. In his perplexity, the vision of the reprint man appears. Mr. Reub is carted away to the city; the doctor carries his trunk and introduces him to the great surgeon; here his mission ends. At the operation, as a mark of honor, he sits in the arena draped in a white gown; he is courteously treated; is addressed Doctor, in mellow, musical tones; is congratulated by the operator on his diagnostic acumen, and that is all that is coming to him. At this angle of the game the wise junior interne conceals his merriment with difficulty. The surgeon gets \$5,000 for his services, and if the doctor has no mileage book he beats it home in a side door Pullman—a sadder but wiser man, glad only in the conviction that he has done a few stunts for suffering humanity.

When he arrives home he meets his good wife, who is delighted to see him. When she inquires how much coin he received for his professional trip he becomes peevish. Her mind, untutored in medical ethics, can not comprehend the lofty disdain of her husband for money, especially since the children need new shoes; old Molly, the faithful mare, is near played out, and a hard winter season is approaching. After pondering over the matter, he wakes up to the fact that he is a chump, that old Mr. Reub does not care a bit who got his money as long as he recovered his health. As a reward for his persistence in recommending the surgeon to operate on him, Mr. Reub sends our friend a load of hay to feed old Molly.

It dawns on him that platitudes on the glory of the profession and good of humanity are overworked and contain a large element of "bunk" that, for instance, many members of the committee on the abuse of medi-

cal charity are directing geniuses of the largest free dispensaries, that instead of himself and family feasting occasionally on chicken they are getting back close to pork chops and glad to get them. At last he joins the local medical society, fraternizes with the brethren, finds them all good fellows, but persists in scolding about economic conditions he and his class are responsible for.

Should the surgeon pay this doctor for bringing him his case? Well, I should say not. As an elementary business principle it would be without precedent to pay commission on business not needed or appreciated. This surgeon's physical capacity is taxed to the utmost, his reputation is supreme, the early inspiration that guided him to what he is was helped by a lot of perspiration. That is why those seeking his advice pay the price. Yet this same type of man will go out of his way to treat your family and mine well. Personally I have the greatest respect for the man that can deliver the goods. I feel honored by the criticism of such men when my professional work falls below par. I find no fault with the consultant's business methods, but for business reasons I can not follow them. When the self-appointed apostle of reform in business morals starts to convert me to his way of thinking, he must come to the temple with clean hands; when he starts on his mission, he must begin with the individual unit in the profession. I am one of the units—an obscure one, to be sure, and frankly confess in this respect I am incorrigible.

Business is business in medicine as anywhere else. If you do not believe it subscribe for a journal edited by doctors. Do not pay for it and see what will happen to you.

This brings us to the point: If we need counsel and are sincere, whom shall we choose, as this is largely a matter of personal equation? The analysis would be difficult. We may honestly entertain some undeveloped opinions even in regard to great men. Some of the most distinguished clinicians are avowed therapeutic nihilists; some very clever operators leave important postoperative details to unpaid subordinates. The best of us sometimes lose patients over 80 years of age.

When I began to practice in this town I was broke, but, optimistic by nature, I promptly got married. I had taken the fashionable trip to Europe and that finished me, financially speaking. About this time Dr. Werkmeister returned home after a two years' absence abroad. We located in the stockyards district, a few blocks apart. We became friends and have remained so. There was an immense clinical field, plenty of work, and we did our share of it. We had no hospital facilities; at that time those institutions were closed to outsiders. We did our first appendectomy on a kitchen table without the aid of a nurse; that fellow is living yet. Money was tight and the people had the professor habit bad. When any of them thought they were seriously ill a consultation was requested. It did not take us long to discern that after the \$10 fellow was paid there was oftentimes little left for us, and, as we needed the currency, we decided on making different arrangements. We had a memento of graduation days' affluence—a plug hat of ancient



vintage. When I requested counsel the doctor donned the tile and responded and *vice versa*. This system worked well; sometimes, of course, fastidious persons would insist on the real thing. We divided fees when we received any. When not, we charged it up to experience. This continued for twelve or more years.

When a patient calls me to treat him I contract to cure him if I can. To accomplish this result I bring to my aid every medical, surgical or other means I am familiar with. It is none of his concern who gets the money as long as he is freed from liability for services rendered. I pay the man that helps me, and if I assist another I expect pay for it if there be any change in sight. The patient's money is no use to him without his life. If you save his life you are entitled to half his money, but if you are afraid of jeopardizing your future by asking for it be content with the generosity of your patient. The fellow that rides in a \$5,000 gas wagon and makes more money in a week than I probably earn in a year will tell you in eloquent, rhetorical flights that this reasoning is pernicious and unsound. Weigh his motives and you will find he has an ax to grind and he is looking for some professional block-head to turn the stone.

In conclusion, I would suggest that we banish hypocrisy and be on the square with ourselves at least. There is plenty of sunshine in the practice of medicine; there is no reason why we should always stay in the shade; let each one have his little say on this topic and then forget it; let us be on good terms with each other while plodding along in this moral vineyard, because we will, all great and small, be a long time dead.

Very respectfully,

M. T. NAUGHTON, M.D.

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EXTRACT FROM A FEW ADDITIONS FROM A LETTER FROM  
PARIS BY DR. P. SCHÖBER APPEARING IN THE  
GERMAN MEDICAL WEEKLY, OF BERLIN,  
DEC. 3, 1908.

The Second Congress of French physicians, held at Lille, June 25-28, 1908, took up two important subjects—one concerning the teaching and examination of applicants for license to practice; the other, dichotomy, the term used by the French for the splitting of fees between the specialist and family physician. This abuse was first introduced by the celebrated surgeon, Pean. He gave the family physician who brought him the case exactly one-half the fee which he received for performing the operation. Good fees are received for operations in Paris, and thus it became a good business for the family physician to drum up cases and railroad them to the great divider. (For many years Pean operated in the government hospitals. His assistants were internes supported by the government, and probably a great part of his instruments, dressings and drugs were supplied from the same source. As a result this Prince of Medical Grafters died about ten years ago worth several millions. For many years he was denied admission to the

French academy. He was never appointed to a professorship. The evil that he did lives after him, the good was interred with his bones.)

This abuse rapidly spread. The majority of surgeons in Paris were compelled to do the same thing to a greater or less extent. Then all the other specialists did the same—obstetricians, oculists, laryngologists, otologists. Even the medical men who were called in consultation divided with the one calling, and finally the dentists, druggists, instrument makers, midwives and nurses embraced dichotomy. That this habit is unworthy of the doctor goes without dispute, for the dichotomy was a secret agreement between the family physician and the specialist behind his back and at the expense of the patient. This abuse increased and greater and greater demands were constantly made. Some of the family physicians demanded and received 75 per cent. of the fee from the specialist and even demanded more. As there is no professional court in France with power to regulate professional matters by proper discipline, Dr. Renon appealed to the congress for moral support in putting an end to this affair. The congress condemned the practice, but they laid down the axiom that the family physician should receive a much higher fee when a consultation is held or operation performed on one of his patients than he received for ordinary attention. It was, therefore, proposed by Renon, in place of the settlement with the specialist who has been called into consultation, that a bill be presented for the consultation or operation to be rendered by both the colleagues taking part. In this manner there would be no secret arrangements behind the patient's back and also, since the bill has not specified, there would seldom be any objections to the price by the patient because the patient is prepared to pay the specialist a greater fee, while he is given to niggardliness towards his family physician. If now, as appears probable, the different societies in France in their discussions and publications shall lay down this principle, it must come to pass that the public will learn the new custom of the conditions of the division of fees between practitioner and specialist in a common bill.

The public will be also a gainer by this, for there will then be less danger that the specialist will be called who gives the highest rebate to the family physician, instead of because of his skill and experience.

Several medical societies have declared their acceptance of this plan. One of them in the suburbs of Paris has declared itself as to the proportionate division and stated that in consultations the family physician should receive one-fourth and in operations one-third of the honorarium after deducting the necessary fees to surgical assistants.

With this division taken as a whole, the general practitioner would certainly fare well, and unless he has been accustomed to excessive rebates should be well satisfied.

## COUNTY AND DISTRICT SOCIETIES

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### ADAMS COUNTY.

The fifty-ninth annual meeting and election of officers of the Adams County Medical Society occurred December 14 in the Elks' club rooms, Quincy, with an attendance of fifty-seven active members, Dr. J. B. Shawgo being in the chair. The minutes of the previous meeting were read and then the election of officers was taken up. Dr. Henry Hart, Quincy, was chosen president; Dr. J. H. Pitman, Camp Point, first vice-president; Dr. T. B. Knox, Quincy, second vice-president; Dr. C. A. Wells, Quincy, secretary; Dr. R. J. Christie, Jr., Quincy, treasurer; Drs. Robbins, Brenner, Quincy and Knapp, Mendon, were elected censors; Dr. John H. Rice, Quincy, delegate to the state society for two years; Drs. Pendleton, Ashton and Ericson, all of Quincy, were elected as the library committee and trustees. The secretary's report showed a paid-up membership in good standing of 77. The library committee's report showed progress in cataloging and arranging the society's library and also made mention of the donation to the society of the valuable library of the late Dr. M. Rooney.

C. A. WELLS, Secretary.

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### BUREAU COUNTY.

The thirtieth semi-annual meeting of the Bureau County Medical Society was held at the city hall, Princeton, Ill., Thursday, Nov. 12, 1908, with a large attendance. Dr. G. G. Pratt, of Buda, was elected a member of the society. The treasurer reported total receipts \$100.78, disbursements (including secretary's honorarium) \$58.50, leaving a balance on hand Nov. 12, \$42.28.

Two letters from the American Medical Association were presented and read: one from the department of public instruction in regard to the organization and development of a system of popular lectures on medical matters, the other from the directory department regarding a list of advertising companies, for reference. No action was taken.

Dr. S. E. Mason, of Cherry, reported a case of tubercular peritonitis, with its treatment. It was supposed to be tubercular peritonitis, but later developments show more of a cancerous nature. Dr. John A. Robison, of Chicago, read a paper on "Medical Retrospection," and included in it a very interesting and instructive talk on cardiac insufficiency, giving the various forms, causes, symptoms and treatment. For the latter he spoke of the good obtained from balneological exercise of the Schott Bros., of Nauheim, which consists of saline carbonated baths and graduated resistant exercise. The baths need not necessarily be carbonated, but a method of home treatment could be easily managed, as a 1 per cent. chlorid of sodium, with the strength gradually increased to 2 per cent. For increased cutaneous excitation, chlorid of calcium used in a 2 per cent. solution gradually increased to from 3 per cent. to 5 per cent. The carbonic acid baths are given in two methods, slow and rapid; in the latter the acid is liberated more rapidly. He demonstrated the technique for resistant exercises, and emphasized the importance of care and close observation of the patient in giving them.

Dr. B. F. Landis, of Tiskilwa, presented an interesting paper on the "Cause and Prevention of Uterine Hemorrhage." Dr. J. F. Percy, of Galesburg, read an

interesting paper on the "Treatment of Suppurative Peritonitis." He began his paper by relating the theories of the past relative to the causation of peritonitis, and the treatment in vogue, based upon these theories. He referred to Ochsner's views as to the part that peristalsis played in the dissemination of the infection, and to that surgeon's insistence upon the absolute necessity of withholding everything by mouth from the patient. He explained in detail Ochsner's treatment, all of which was aimed at the prevention of peristalsis. Dr. Percy showed that there were three basic principles which must be recognized in the treatment of peritonitis. First, to limit the spread of the infection, by Ochsner's method; second, to provide for the escape of the infection; third, to establish physiological elimination actively. The second principle is obtained when free openings are provided. These are important, not so much for the escape of the infection as for the relief of tension. The third important principle to be observed in the treatment of suppurative peritonitis is the introduction of normal salt solution by the drop method into the lower bowel, while the patient is in the sitting or Fowler position. The doctor detailed the steps by which the drop method could be successfully used in order to obtain this physiological elimination. The uselessness of evisceration and of the removal of the coagulated lymph from the bowels was insisted upon.

Dr. Percy spoke of the value of enterostomy in the desperate and seemingly hopeless class of cases. Three of these cases were reported, all of which recovered. The Doctor's first case was operated June 6, 1903, before he knew of the paper by Heidenhain before the German Surgical Congress in 1902. Drugs were shown to have no place in the treatment of suppurative peritonitis, and the experimental work of Crile was referred to in this connection. The Doctor closed his paper with the statement that the work of Wright on the "Opsonins" and that of Loswig and Richter and others on "Artificial Hyperleucocytosis," was merely the prelude to the final cure of these cases without the aid of surgery.

The following officers were elected for the ensuing year: President, Dr. J. F. Taylor, Buda; first vice-president, Dr. C. F. Horner, Tiskilwa; second vice-president, Dr. W. C. Griswold, Princeton; secretary-treasurer, Dr. O. J. Flint, Princeton. Dr. Owens spoke of the coming meeting of the North Central Illinois Medical Association, which the Bureau County Medical Society has invited to meet in Princeton, and moved that each member of the society be assessed \$1.00 to defray the expenses of the meeting. The motion was carried. Dr. Owens moved that a vote of thanks be given the non-members, Drs. Percy and Robison, for their kindness in presenting a paper. The motion was carried.

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#### COOK COUNTY.

##### CHICAGO MEDICAL SOCIETY.

A regular meeting was held Nov. 11, 1908, with the President, Dr. Alfred C. Cotton, in the Chair. Dr. A. J. Ochsner reported a case of splenomegaly, the pathological features of which were presented by Dr. Louis Hacker. Dr. Joseph C. Beck read a paper entitled "The Bismuth Paste Treatment in Ear, Nose and Throat Affections, with Report and Presentation of Cases, Radiograms and Specimens." The discussion was opened by Dr. Henry Gradle and continued by Drs. A. J. Ochsner, Emil G. Beck, J. H. F. O'Neill, William L. Ballenger, A. H. Andrews, and in closing by the essayist. Dr. B. C. Corbus read a paper entitled "Erosive or Gangrenous Balanitis—a New Venereal Disease." This paper was discussed by Drs. F. R. Zeit, Fred G. Harris, J. F. Hultgen, and in closing by the essayist. Dr. Henry B. Hemenway read a paper entitled "Public Duties of Physicians." \*

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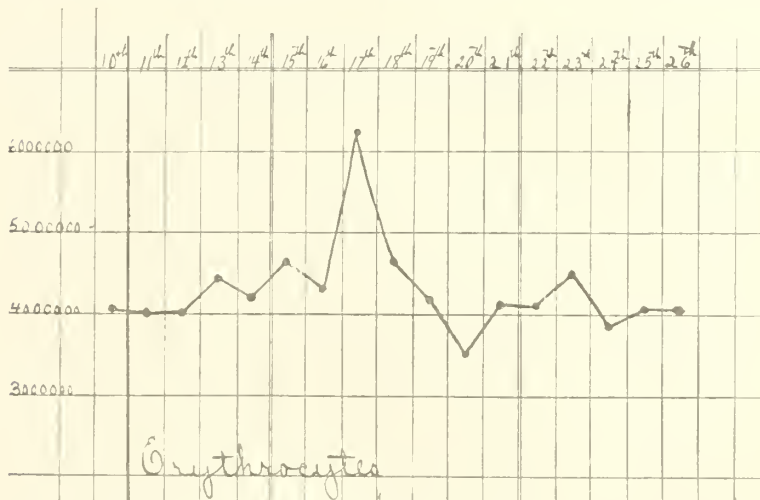
\* For text see page 37.



## SPLENOMEGALY.

Dr. A. J. Ochsner:—This is a specimen of a spleen in a case of splenomegaly. The specimen weighs seven pounds, is sixteen times the normal size, and the largest spleen that I have ever removed.

There are a few points in connection with the removal of spleens which are of importance to those who undertake this operation. There are operations like hernia operations, hysterectomy and thyroidectomy that have a definite technic, and among those surgeons who remove spleens there is a more or less definite technic. The points to be remembered in removing a spleen are these: The spleen itself is brittle, consequently the manipulations must be gentle. The veins entering the spleen are extremely thin walled but large, and consequently hemorrhage is very severe. In the control of hemorrhage lies the secret of the entire operation, so that in approaching the spleen one should begin from below, and first dispose of all the blood vessels which enter it through the peritoneal attachment, and isolate the splenic artery and vein, grasping these separately. After these have been severed, the next important point is the upper attachment. The spleen is frequently adherent above. In this case it was adherent to the



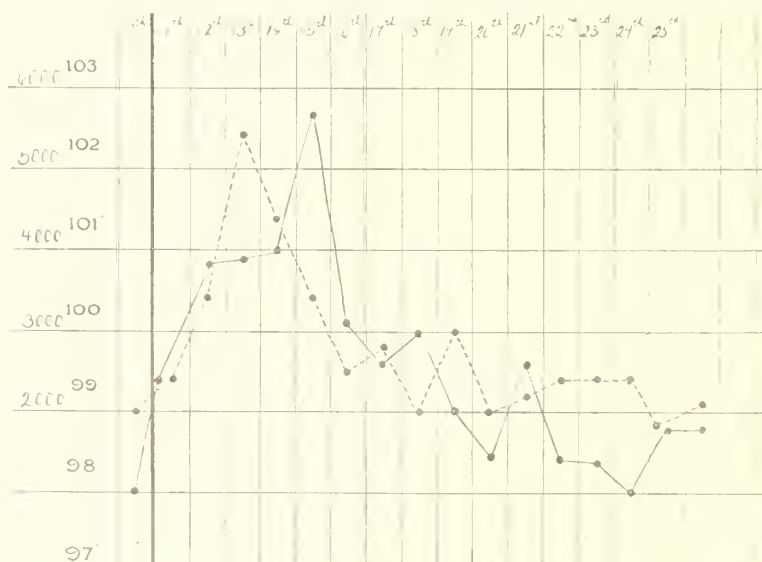
stomach at this point, it received a portion of its blood supply from the gastro-epiploic vessels, and there is where one is liable to make two mistakes. One error from hemorrhage again, and a second error from injury to the stomach. Both of these, if you will appreciate them, can be easily avoided. The late result from injury to the serous surface of the stomach is easily corrected by folding in. If one applies these principles, he will find that splenectomy is as safe as hysterectomy or any other major surgical operation, provided the patient is not suffering from leucoeythemia. If the leucoeytosis is higher than 50,000, it is a dangerous operation; if below that, or at least if below 10,000 or 15,000, it is very safe. The weight of this spleen was seven pounds. Seven ounces is the weight of the normal spleen, so that this spleen is sixteen times the normal weight.

I will now ask Dr. Haeker to speak of the pathology of the case.

Dr. C. W. Louis Haeker:—This spleen was removed this morning from a patient, 35 years of age, who weighed about 125 pounds. It projected downward, and 5 centimeters to the right of the umbilicus. There were numerous bands of adhesions present about the hilum connecting it with the cardiac end of the stomach. The peritoneum elsewhere was perfectly smooth. Over the anterior surface of the upper pole the peritoneum was somewhat thickened and opaque. As Dr. Ochsner has stated, this spleen weighed seven pounds, or it is

sixteen times heavier than the normal spleen. The diameters are 33, 15 and 7 centimeters. The consistency of this spleen is subnormal, especially in the lower pole. On exposing the spleen we found that the veins were markedly dilated, especially the splenic vein, which measured approximately 2 centimeters in diameter. There was no evidence of ascites present in the peritoneal cavity, and the liver was perfectly normal. There were no enlarged lymph nodes. This is a case of primary splenomegaly. We were unable to find any etiologic factor. The blood was carefully examined, and we found no evidence of malaria. Last night a blood count was made and we found a leucopena, that is, we found 2,000 leucocytes, 75 per cent. of which were lymphocytes. The number of red cells was 4,080,000; hemoglobin, 80 per cent. Six hours after operation another count was made, at which time we found 2,400 leucocytes and 4,000,000 red cells; hemoglobin was approximately 80 per cent. There is no evidence of syphilis in the patient, so that we think we can exclude that as an etiological factor; in fact, there is very little known about the etiology of this disease.

Warthin, in 1903, before the Association of American Physicians, called attention to cases in which there was found no calcification, with stenosis of the



Solid line represents temperature; dotted line, leucocytes.

portal vein. Hoeke, in 1902, published a paper in the *Berliner Klinische Wochenschrift*, in which he reported a case with autopsy findings, and he thinks these cases are due to congenital lues.

NOTE.—Since the operation the blood has been examined every day, the results of which are indicated on the accompanying charts and table.

Date.	Temperature.	Leucocytes.	Erythrocytes.
November 10.....	98	2,600	4,080,000
November 11.....	99 4/10	2,400	4,000,000
November 12.....	100 8/10	3,400	4,000,000
November 13.....	100 9/10	5,400	4,510,000
November 14.....	101	4,400	4,210,000
November 15.....	102 7/10	3,400	4,640,000
November 16.....	100 1/10	2,500	4,380,000
November 17.....	99 6/10	2,800	6,120,000
November 18.....	100	2,000	4,620,000
November 19.....	99	3,000	4,200,000
November 20.....	98 4/10	2,000	3,590,000
November 21.....	99 6/10	2,200	4,090,000
November 22.....	98 4/10	2,400	4,070,000
November 23.....	98 4/10	2,400	4,525,000
November 24.....	98	2,400	3,854,000
November 25.....	98 8/10	1,800	4,110,000
November 26.....	98 4/10	2,100	4,110,000

Dr. Joseph Beck read a paper entitled "The Bismuth Paste Treatment in Ear, Nose and Throat Affections, with Report of Cases, Radiograms and Specimens."

DISCUSSION.

Dr. J. Rawson Pennington:—I think Dr. Beck is to be congratulated on his most excellent paper. It shows study and careful observation. While I have had no experience with this paste in the treatment of sinuses and fistulæ of the nose and ear, yet I have had some experience with it in the treatment of rectal fistulæ and would like to record my observations, as I believe that that which is good in the treatment of such conditions in one part of the body should likewise be valuable in the treatment of similar conditions in other parts.

Judging from apparent results in treating 19 cases of rectal fistula, with this paste, I consider it a valuable discovery. In 14 of the 19 cases which I have treated the discharge has ceased and the fistulæ are closed; and, to the best of my knowledge, they are well. In one of them I could and did pass a probe through the external opening, which was near the anus, upward and backward between the rectum and sterum to a point about opposite the promontory of that bone.

I question whether any surgical operation looking to a complete division of that tract would have been justifiable. Moreover, he likewise had an abscess in the left groin which probably communicated with this fistula, though it was not demonstrated. About three ounces of the paste were injected into this fistula at the first sitting. It is now closed, and he has had no discharge from it for more than two weeks.

Dr. Henry Gradle:—The excellent results obtained by Dr. Emil G. Beck by the injection of tubercular and other noses with bismuth paste ought to tempt specialists in our line of practice to apply the same treatment to suppurations within the nose and accessory cavities, as well as the ear. The painstaking work Dr. Joseph Beck has done in this line and reported to-night is very promising, but the conditions are not the same as in the original surgical field. In Dr. Emil Beck's cases he dealt with collapsable walls, with sinuses having either one exit only, or if there were multiple exits, they were easily closed; and furthermore, he dealt with cavities not lined by mucous membrane or by epithelium. All these conditions are different in suppurating spaces within the nose, its accessory cavities, or the ear. Now whether under these circumstances the bismuth paste treatment will lead to results superior to what we are accustomed to obtain by other methods can only be learned by experience, as Dr. Joseph Beck has attempted to prove,

Personally, my own experience has been extremely limited. I have had two cases of dacryocystitis in which the results were satisfactory. In one the cure was effected more rapidly than I believe I could have obtained by other methods while the other was nearly cured in a short time when the patient left the city. I have treated two cases of persistent discharge from the middle ear, one after a radical operation, the other after a simple mastoid. Both of these cases however were total failures.

On mechanical principles the treatment does not particularly appeal to me as applied without preliminary operation to the complicated and labyrinthine system of spaces adjoining the nose or surrounding the middle ear. I do not believe that they can be fully filled with the paste through the natural or even an artificial opening.

The tables published by Dr. Beck are not convincing that he has obtained better results in non-operative cases than he could have obtained by the usual well tried methods. Of course one cannot tell from his tables, nor even by reading his paper, which I had the privilege to do, whether his results would have been as quickly secured by other methods. There may be individual instances in which his results were superior to what he might have expected from other treatment, but from a general perusal of his paper I was not at all convinced that in the non-operative cases the treatment has any particular merit over the

customary methods. It may be different, however, in the operated cases. As I have not had personal experience after operations perhaps I had better not trespass on the time of the society by giving mere opinions. But the rapidity with which some of his cases healed and the fact that we are now able after the operation to inject a cavity thoroughly with the paste and to occlude its escape, would lend probability to the view that this is a valuable dressing for operative cases in the various forms of suppuration and that this treatment may hence prove a distinct improvement over the dressings heretofore applied.

Dr. A. J. Ochsner:—I have had the privilege of using this method in general surgical cases. Dr. Emil G. Beck kindly discussed this matter with me after he prepared his first paper on the subject, and seeing the results of his cases and the class of cases in which this form of treatment is indicated, I was impressed very forcibly and deeply with its value, and immediately made use of the method in some twenty cases of old tuberculous sinuses that I had under my care at that time. The possibility of application of bismuth paste is so great, the proportion of satisfactory results so large, that I look upon the use of the bismuth mixture in appropriate cases as the most important advance in surgery that we have had during the past two years.

We have applied the mixture in practically every part of the body, with the exception of some special parts, like the nose. We have had old empyema cases that had been operated and reoperated many times, with communication with a bronchus, and within six or eight weeks these cases have healed and have remained so by the use of the bismuth mixture. We have had a case of fistula leading down to the pancreas from gastrectomy which persisted in discharging, and which healed after a few weeks following the injection of the bismuth mixture. We have had cases of prostatectomy, with persistent fistulæ, that have been treated with the bismuth mixture, with satisfactory results. We have had two cases of tuberculous sinuses leading down to tuberculous kidneys, in which we have effected a cure. One of them gained forty pounds since the first injection. And so throughout the field of old tuberculous sinuses the proportion of satisfactory results has been so great, the application so simple, and the number of cases—cases which were formerly considered hopeless—so large that I look upon this as one of the very best things we have in surgery. Patients with tuberculosis of the spine, psoas abscess cases which formerly developed a septic condition and died within a few months, have picked up, gotten well, and remained well following the use of the bismuth mixture.

Dr. Emil G. Beck:—The introduction of bismuth paste in the treatment of ear, nose and throat conditions will be no doubt of great interest to those who are engaged in that work, and they will soon convince themselves that the picture which my brother has drawn of his results is not exaggerated. On the contrary, he has had even better results than he has reported to-night. I have watched his work with great care, and I am careful not to make any extravagant statements.

From the standpoint of general surgery, I believe in his after-treatment of acute mastoid disease, namely, using the paste as a dressing after operation, is the best thing my brother has demonstrated to-night. When he began I was certain he would have some good results, but had no idea that the method would be applicable to so many conditions in which he has applied it. In fact, I warned him in the beginning not to use it in any of the accessory sinuses, fearing some of the paste might enter, through some anatomical abnormality, the cranium and produce compression. However, he has shown by a large number of cases that no bad results follow, provided one is familiar with the anatomy and the technic of the method. The method certainly commands a fair trial by others in the class of cases he has reported. In the cases he has treated, however, we must remember that hardly any of them are tubercular, while 80 per cent. of the cases in general surgery are tubercular. This fact will insure a more lasting future for the non-tubercular case, because we are entering upon an era in which sinuses due to tuberculosis will not be met with as often in the



future as they are at the present time. In the first place, we have the killing off of tuberculous cattle; we have vaccine therapy, and the fresh air treatment of tuberculosis, and these will prevent many cases from going on to the stage of abscess formation, and if an abscess should form we have the method which I have outlined to prevent secondary infection, and in that way prevent the formation of a sinus. I hope the time will come when sinus formation will be looked upon as a medical blunder, the same as we consider to-day post-puerperal sepsis.

I feel that this is a good opportunity to sound a note of warning in regard to bismuth poisoning. There are two varieties of bismuth poisoning. One is where the bismuth has been given by the stomach in from forty to sixty gram doses for outlining the stomach and intestines. This form of poisoning has been reported from Europe from many of the clinics there for the past year or so and is known as nitrite poisoning. The nitrites are liberated from the intestines and death quickly follows. In the other form of poisoning we have absorption of the bismuth from the injection of say more than one hundred grams of paste. The absorption of the bismuth may go on slowly and produce entirely different symptoms. It will not produce hemoglobinemia due to the nitrite poisoning, and no death has been reported due to that cause, except that Kocher reported several cases in 1882. I reported what I thought was a case of this kind before the Chicago Pathological Society recently, but in the discussion I was assured that death was not due to bismuth poisoning, but bismuth intoxication, death being due to another cause.

At this time I desire to thank Drs. A. J. and E. H. Ochsner, who have helped to inform the medical profession of the value of the method of bismuth vaselin injection, and have thereby assisted me in accomplishing what probably would have taken years for me to accomplish.

More than to anyone I am indebted to my brother, Dr. Carl Beck, who has not only guided me in my experiments but who first employed and advised me of the bismuth vaselin paste injection for diagnostic purposes, the method which later on led us to the discovery that the injections were also of great therapeutic value.

Dr. J. H. P. O'Neill:—One dose of amber vaselin injected into a guinea-pig will reduce the bacteria in the intestines 33 per cent. Dr. Biehn and I proved this by some experimental work we did some two years ago. One dose will kill from 30 to 40 per cent. of the bacteria in the intestines. Now, perhaps the bismuth paste affects the bacteria in these sinuses, so that the cure may not be due entirely to the bismuth.

Dr. William L. Ballenger:—I have had a little experience in the use of bismuth paste during the last two months. I have used it in about 25 cases, all of which have been ethmoidal except one, and in this I used it in the frontal sinus, and in one antrum case. I have not used it in any ear cases, nor in any cases except as a postoperative treatment. Personally, I must say frankly, I have not been able to notice any advantage in this treatment over the methods formerly used by me. I am still persisting in its use and am trying to perfect my technic, and I hope in this way to get better results.

In studying Dr. Beck's tables, like Dr. Gradle, I am not impressed that there is any particular advantage in this treatment except in the mastoid cases, over other methods. For instance, in chronic mastoid cases where we have done a radical mastoid operation, of which Dr. Beck reported a number of cases to-night, we are accustomed to expect a cure from a single operation—at least, I am, and I think most operators make that claim. Dr. Beck effects his cures by the use of the bismuth paste. Now, the question arises whether he would not have gotten these cures without the bismuth. That, of course, we do not know. My small experience has not been of such a character as to impress me with the fact that bismuth paste in these sinus cases is particularly advantageous.

Only yesterday I did a turbinectomy, with partial removal of the ethmoid, and filled the nose full of paste, put in an anterior plug of cotton to retain the

paste, and the patient had a severe hemorrhage; although Dr. Beck makes the claims that one of the uses of the paste is to prevent hemorrhage. This is the only case in which I have had hemorrhage following the use of the paste.

I can not say any more on the subject. I wanted to report my personal observations without any particular comment; but I shall withhold my final opinion as to the results until I have had a more extended use of the paste.

Dr. A. H. Andrews:—I have had only a limited experience in the use of bismuth paste. I have used the paste with very satisfactory results in a few post-operative sphenoids, two cases of antrum of Highmore disease and a number of radical mastoids, in which the paste was used as an after dressing. I have had a number of cases which have not been operated upon in which I was not able to obtain satisfactory results from the use of the bismuth.

Dr. Beck speaks of injecting the bismuth paste in chronic suppuration of the middle ear. I have not done this for the reason that I have been afraid to do so.

In doing mastoid work I have frequently found a dehiscence in the upper wall of the attic or antrum, and I see no reason why if we plug up the middle ear, the attic or aditus, while the suppurating process is going on in the antrum, if a dehiscence is present we may not have more trouble than we anticipate. So far I have not been able to diagnose conditions in the roof of the attic and antrum with sufficient accuracy to feel justified in employing the paste in chronic suppurations of the middle ear. I am also afraid to use it in disease of the sphenoid cavity unless I have removed the anterior wall and demonstrated that there is no communication with the cranial cavity.

Dr. Beck (closing the discussion):—I wish to thank the members for their free and liberal discussion of my paper, because it is well for us to get the unfavorable as well as favorable results from this treatment.

I appreciate the note of warning sounded by my brother, as well as the other gentlemen, as it is desired.

Most of the gentlemen who have spoken have had but a limited experience with this treatment in comparison with the number of cases I have had the opportunity of seeing and treating; hence they can only speak in a limited way of what may or may not be facts. I have treated 319 cases without any ill result. I have treated a large number of different conditions. For experimental purposes only, for instance, I have treated a large number of cases of hypertrophic rhinitis and of tonsillar affections; not with the idea of curing these affections but to improve the condition if possible. I have had some irritation of the labyrinth. In one case of chronic suppuration of the middle ear with a fistula of the posterior semicircular canal, but with moderate pressure and watching the patient carefully, I could see that the patient was not having any trouble during the injection, and I wanted to get the bismuth into the fistula that was present. It was my desire to cure the condition by this method, and I succeeded. Nature had evidently walled off sufficiently to allow of the amount of pressure I use and prevented the paste from getting into the membranous semi-circular canal and causing grave complication. I am very careful in using the bismuth paste in all such cases. There are cases I have not treated by this method because, like Dr. Andrews, I have been afraid.

So far as taking off the anterior wall of the sphenoid is concerned, I do not do that. I take off as little as possible; I just make an opening sufficient to introduce the cannula, because if you take off the anterior wall the bismuth will fall out; it will not stay in, consequently you do not get its action, and only in those sinuses that retain the bismuth do we get results.

Dr. Gradle referred to my tables. I do not claim any great results from non-operative cases. I stated in my paper that of the large number of cases I have treated without at least a middle turbinectomy and puncture at inferior meatus the results were *nil*, because the bismuth does not enter infectious areas without this procedure. So it is with the suppurative ears he treated, with no results. He did not get the bismuth in.

In answer to Dr. O'Neill, I have used vaselin alone, and so have others, and have failed to get any effect from it either in nose or ear suppuration.

With regard to the remarks made by Dr. Ballenger, he has not perfected his technic. I had the same trouble before I improved my technic. The glass syringe we use to force bismuth into the nose will not enable us to reach the accessory cavities of the nose.

With regard to the nasal dressing, patients must not be allowed to walk after the injection of bismuth, because in walking the bismuth drops into the patient's throat, and therefore hemorrhage occurs thereafter. I place my patients in bed after nasal operation and injection with bismuth as a dressing, and there is no hemorrhage.

Dr. B. C. Corbus read a paper on "Erosive or Gangrenous Balanitis a New Venereal Disease."

#### DISCUSSION.

Dr. F. R. Zeit:—I think Dr. Corbus is justified in claiming this as a fourth venereal disease in view of the distinct clinical history of these cases; in view of the marked destruction of the organ due to gangrene, much more marked than in any other venereal disease, and in view of the bacteriologic findings which are quite distinct from those in the other venereal infections. He seems to attribute less importance to the spirochete he found than to the vibrio.

Two years ago von Prowazek and Hoffman claimed that the spirochæta balanitidis is the cause of erosive and gangrenous balanitis. It is a well known fact—and my experience of many examinations for the spirochæta pallida in different parts of the body confirms it—that wherever you have gangrenous conditions about the body you find a symbiosis of two forms of micro-organisms. The one is a spirochete which is more or less similar to the pallida, the syphilis spirochete, and, second, a vibrio-like organism. The findings are the same as those in noma; the same as those found in gangrenous stomatitis; the same as those which we find in gangrene of the lung and malignant tumors, as carcinoma, and the same as we find also in various ulcerative conditions of both the small and large intestines and in Plaut-Vincent's angina.

The question is, What is the organism which the author of the paper designates as a spirochete, and which Hoffman says is different from the spirochæta refrigens, being much more delicate, and having much closer and more regular spirals than the spirochæta refrigens? If we examine a section of gangrene of the lung we find two organisms in the tissues which show exactly the same morphology as the bacterial smears from cases of balanitis gangrænosa, a vibrio and a spirochæta. I have given Dr. Corbus a Levaditi-stained section from one of the cases of gangrene of the lung I examined, in which can be seen spirochætes in great number which resemble the spirochæta pallida somewhat. In other parts of the sections large clumps and clusters of the vibrio are seen. The essayist has explained how this disease may be produced by unnatural sexual intercourse; but we must not forget that spirochætæ of the same morphology are found in gangrenous conditions everywhere about the body, although it must be admitted that those found in gangrenous balanitis have the same morphology as those found in mouth fluids. In the mouth fluids we have the eel-shaped spirochæta buccalis, which is not infrequently found in gangrene of the lung. We have a very minute organism with close spirals, the spirochæta dentium, and a third type of spirochæta which is hard to distinguish from the spirochæta pallida and corresponds to the descriptions of Hoffman and Prowazek of the spirochæta balanitidis. Muchlens calls this type of spirochæta, when found in mouth fluids, the "intermediate type," intermediate morphologically between the spirochæta buccalis and the spirochæta dentium. It is not often found in mouth fluids and I have called it the pseudopallida. With Giemsa the spirochæta buccalis stains blue, the spirochæta dentium red and the spirochæta pseudopallida bluish red. The spirochæta balanitidis also stains bluish red with Giemsa.

I think the clinical picture, together with the bacteriologic findings in these cases, could well lead one to think that we have here a fourth venereal disease; but the possibility of this spirochæta getting to the genital organs in other ways

than those of unnatural sexual intercourse exists, and it must not be forgotten that mouth spirochætæ are found in large numbers in ulcerative conditions of the small and large intestine. Gangrenous balanitis has been experimentally produced in man and monkeys by inoculation of the preputial sac with mouth fluids. In all gangrenous conditions, everywhere about the body, with the production of bad odors, we find spirochætæ of the pseudopallida or buccalis type and vibrios, growing in symbiosis and under anaerobic conditions.

Dr. Fred. G. Harris:—I have nothing particular to add to what Dr. Corbus has said in his paper except to emphasize the point that we are dealing here with a distinct clinical entity. It is clinically and bacteriologically different from chancroidal infection; it is different from herpes, and different from other forms of balanitis. Clinically the symptoms are very marked. First, there is marked edema, and this form of infection seems to predispose to marked exudation. The penis may become of a dark-red color, producing complete phimosis. This marked edema combined with the toxins of the organisms leads often to gangrene. It is true, we have the milder forms of the disease, simple balanitis, the erosive or mild ulcerative type. Occasionally we get the severe gangrenous type, as in the case reported by Dr. Corbus, where the whole duration from the time of exposure until the loss of the penis was only thirteen days. In these cases there is no gas-forming bacillus. The milder cases are not at all uncommon. Of the cases with the gangrenous form at the Cook County Hospital we probably have six a year, showing that it is necessary to distinguish between chancroidal infection and infection with this organism, the treatment being entirely different.

Dr. J. F. Hultgen:—I am very glad that Dr. Corbus has called our attention to this condition as a distinct clinical entity. Clinically, as well as bacteriologically, it can be easily distinguished. I would object, however, to calling this a new disease, for the reason that a good many years ago (1898) Vincent spoke of it and distinctly demonstrated it under the name of *symbiose fuso bacillaire*. At that time he was a military surgeon. As a rule, it is not a balanitis, but a balanoposthitis, the two layers of foreskin being affected. Since I came back from Paris I have had eleven cases in my own practice. I showed some cases before the Stock Yards Branch of this society, and the secretary here will probably remember them. To Vincent belongs the credit and priority for bringing this disease before the profession.

Dr. Zeit thinks a good deal of symbiosis of the various organisms, and I fully agree with him. Regarding symbiosis of these two organisms we find it more often than we are accustomed to look for it, in other conditions besides balanoposthitis. I also agree with Dr. Corbus in that we ought to look more for it in all gangrenous conditions everywhere, in the intestines as well as in the lungs and in the mouth. We do not know anything about anaerobic bacteria anyway.

The diagnosis of this condition is easy. In fact, patients come to the physician very early, as early as the second day, or most of them come on the third day, with a profuse dribbling from the preputial opening. There is no other discharge so profuse and so nauseating as this one.

The treatment is very simple. All we have to do is to get a little air or oxygen under the prepuce and if the patient can retract it a cure can be effected over night. The ulcers on this semi-mucous membrane get well by themselves without special treatment.

Dr. Corbus (closing the discussion):—In 1889 Batailla and Berdal first described la balanoposthite erosive circinée. In 1904 Sherber drew an analogy of this form of disease and other forms, and in 1904 he designated this as a fourth venereal disease. He designated two diseases as having the same clinical entity. I do not set myself up as proclaiming this to be a new disease, but only reported what Sherber and Mueller have said regarding it, and they have proven conclusively that this gangrenous form is a relative sliding along the scale of a severe form of infection recognized for some fifteen years, but not recognized as a clinical entity along with the gangrenous form.



*Regular Meeting, Nov. 18, 1908.*

A regular meeting was held November 18, 1908, with the president, Dr. Alfred C. Cotton, in the Chair.

Dr. Willis S. Anderson, Detroit, Mich., read a paper, by invitation, entitled "Nasal Obstruction: Experimental Study of Its Effects Upon the Respiratory Organs and the General System," which was illustrated by numerous stereopticon slides.

Discussed by E. Fletcher Ingals, William L. Ballenger, Joseph C. Beck, Charles M. Robertson and Edwin Pynchon, and in closing by the essayist.

Dr. Gustavus M. Blech read a paper on "Orchidopexy," which was discussed by Gustav Kolischer, Louis Thexton, Arthur Dean Bevan, Carl Beck, and in closing by the essayist.

Adjourned.

NASAL OBSTRUCTION: EXPERIMENTAL STUDY OF ITS EFFECTS UPON  
THE RESPIRATORY ORGANS AND THE GENERAL SYSTEM.

WILLIS S. ANDERSON, M.D.

Laryngologist to Harper Hospital.

DETROIT, MICH.

(Abstract of an address delivered before the Chicago Medical Society, Nov. 18, 1908.)

The writer has been interested in the clinical phase of the subject for many years, and believes that even a moderate degree of nasal obstruction plays an important part in the etiology of disease. The preliminary report outlines the effect upon animals of the artificial closure of the nostrils. Dogs, rabbits and guinea-pigs were used in the experiments. The nostrils were closed either by denuding the surface and suturing the edges, or by sealing with cotton and collodion.

Dissections showed the difference between the throats of animals and man. The nose, throat, larynx and trachea are more nearly on a straight line in the lower animals. The larynx is placed higher in the throat, and the epiglottis is readily seen in the dog and rabbit extending up in front of the soft palate. These peculiarities favor nasal breathing and make mouth breathing difficult. Experiments proved that dogs do not breathe through the mouth as readily as is commonly believed. Dogs with less than one-fourth of the normal space will breathe with their mouths closed.

Lungs of laboratory animals were studied in order to ascertain if they were frequently diseased. It was found that the proportion of diseased lungs in the guinea-pigs was very small. Rabbits frequently have a catarrhal discharge from the nostrils accompanied by changes in the lungs. Such rabbits were not used. A tabulated report shows the effect upon twenty-seven guinea-pigs when both nostrils were closed. All but three nostrils were closed by cotton and collodion without the use of an anesthetic. The pigs that lived over forty-eight hours breathed a little through the nose. It is exceptional for a pig to live more than thirty-six hours with both nostrils closed.

Distention of the abdomen is marked, as a rule, in the pigs that have both nostrils tightly closed. This is due to swallowing the air. The distention is more marked when the intestines are filled with food, and can be lessened by fasting the animal. Distention in some instances seems to be a contributory cause of death, but not the essential factor. Rupture of the stomach occurred in one pig, with distention and death within two hours.

Another table shows fifteen guinea-pigs with one nostril closed. Twelve of the pigs had the right side closed and three had the left side. Two lived eight months with the one side entirely closed. Two died within twelve hours; but it is probable that the other nostril was accidentally filled with collodion, as the pigs appeared similar to the ones with both nostrils closed. Eight died on an average

of 93 $\frac{3}{4}$  days. Three lived thirty days, but in each instance the closed side partially opened. One lived only five days. This pig had one nostril closed before, but it sloughed open. Probably the resistance of the pig was lowered by the former experiment.

Ten rabbits with one nostril closed were reported. The longest duration of life was 113 days; the shortest, 4 days; the average, 43.6 days. Distention of the abdomen was not present as a rule. Death resulted when about one-half of the weight was lost.

In those instances where the hearts of the guinea-pigs and rabbits were examined they were regularly found to have dilatation of the right ventricle. This was especially so in those that had both sides closed or nearly so, and lived from two days to a week. There is some evidence to show that hypertrophy will take place if the animal lives a number of weeks with obstructed nasal breathing. Hearts from normal animals of nearly the same weight were used as controls.

The nostrils of a number of dogs were closed. As a rule one side was entirely closed, or an opening the size of a pin head remained. The other side was about one-half or two-thirds closed.

The following constant results were noted in every instance: Dyspnea present in all of the dogs. It was more marked in the younger dogs, and in a general way was proportional to the degree of obstruction. The breathing was characteristic of asthma and emphysema, with an apparent enlargement of the chest, and retraction of the intercostal spaces. The hair became shorter, thinner and lighter in color, and a dandruff-like scurf was noticed. The general nutrition was affected, and as a result of the lowered resistance some died of an acute infection. These animals showed progressive loss of weight. Those that did not die of infection remained of nearly the same weight, although the appearances of the dogs were changed. They were less active, and the hair, besides becoming thinner, lost its gloss. A peculiar wrinkling of the skin was noticed in several of the dogs. The offspring from mothers with nasal obstruction showed lowered vitality. Some were born dead, and others after a few weeks lost their hair, emaciation increased and death resulted. The blood of one mother and six puppies was examined. The changes were the characteristic picture of secondary anemia.

The five dogs that died in comparatively short time after the nostrils were closed all had disease of the respiratory tract.

There were histologic changes in the lungs of the guinea-pigs and rabbits. Some showed the alveoli and smaller bronchi filled with blood; others an intense congestion, with infiltration of the interstitial tissue with blood. Emphysema was a characteristic picture in a number of instances. Inflammatory exudation was present in a number of sections. A large majority of the lungs examined showed positive changes.

#### DISCUSSION.

Dr. E. Fletcher Ingals:—I wish to congratulate the author of the paper upon the perseverance and patience he has exercised in carrying out these experiments with the hope of doing something which will be of benefit to medical science. He has demonstrated one or two things that are certainly of interest and that will assist us in the care of our patients. He has shown graphically the effects of gradual asphyxiation. He has told us that dogs and guinea-pigs do not breathe through the mouth, even though the nares are closed, excepting a very little. We have essentially the same effect in one of these animals from closure of the nose that we would in man by closure of the trachea or larynx. With the shutting off of the air the strength gradually declines and we have early pathologic changes such as are shown in these pictures. One point of interest is that these dogs breathed fairly well when they had only one-quarter of the normal space. I think a great many human beings do fairly well with much less space

than they should have, but the conditions are very different because the human animal, under certain conditions at least, will breathe through the mouth practically as well as through the nose.

The poor condition of the puppies in the case of the dog that looked so much worse after the Doctor's treatment is very suggestive, notwithstanding that the puppies were carefully fed. It shows that the shutting off of oxygen from the mother caused very weak progeny. They seem to have been in practically the same condition as the mother when five or six weeks old, although they had all the air and all the food they wanted.

The points brought out by the essayist with reference to the breathing of the dog and guinea-pig will be of much value to future experimenters. In endeavoring to find out what the effects of nasal obstruction might be upon man, it must be remembered that guinea-pigs and dogs will not breathe through the mouth, therefore the conditions are very different from those in man with nasal obstruction. I have not had laboratory experience in this direction, but I believe that much may be learned by such experiments, though it often takes thousands of experiments to demonstrate a single point, but this is expected by laboratory men, and this adds greatly to their credit. Anything we can learn from experimentation on the lower animals which will ultimately be of benefit to mankind will be a great gain.

My experience in the treatment of human animals suggests some points to me, although they are not strictly to the point in discussing a paper on experimentation on animals. I want to say, however, that I do not think there is any justification for removing obstructions in the noses of healthy people so long as those obstructions do not materially interfere with respiration. There are some laryngologists who are accustomed to cut off all spurs from all septa, forgetting that these spurs occur in fully 50 per cent. of all human beings. Some of these practitioners, when they find a septum slightly bent, think it should be removed. There are those also who often remove the turbinated bodies. Much operating is done in the nose that is not justifiable. Many healthy individuals breathe fairly well with half the space that we would consider desirable, and I think the majority would breathe very well with three-quarters of what we would consider normal space. The common symptoms of colds, hawking, coughing and raising mucus in the morning, are usually due to obstruction of the nose. Hoarseness is, in the majority of cases, primarily due to the same cause. This condition causes the patient to breathe through the mouth at night, which causes congestion of the larynx, or perpetuates laryngitis from which he would quickly recover if he breathed continually through the nose.

It has been my observation that patients seem to be less affected by constant obstruction of the nose than they do by temporary closure. Perhaps I ought not to put it so flatly, but certainly we find patients with the nose almost completely obstructed by polypi who have breathed through their mouths for many years, and who still seem vigorous in every way. Other patients, with partial obstruction, try to breathe through the nose, but do not get sufficient air, perhaps only half as much as they are entitled to. In these, although the general condition may appear good, we often find the vitality low. Changes in the larynx seem more frequently in patients where there is a temporary obstruction of the nose than when it is permanent. Apparently when obstruction is permanent, the larynx gets accustomed to the cold air and the patient takes in so much air through the mouth that the general health is not so greatly impaired. A patient with permanent obstruction of the nose may get all the air he wants through the mouth, while a person with a temporary obstruction part of the time is under much the same condition as the dog with the nose partly closed. It has been my observation that the relief of nasal obstruction, particularly in children suffering from adenoids and enlarged tonsils, has been followed by wonderful changes in the general condition of the patient; an improvement of about 30 per cent. within six months in a large number of patients will be observed.

Neuralgias over the frontal sinus or cheek and even occipital neuralgias are sometimes due to obstruction in the nares and may be cured by removing the cause of the obstruction.

Dr. William L. Ballenger:—First, I want to ask Dr. Anderson a question, namely, whether he has noticed in sections of the lungs any changes in the endothelial lining of the air vesicles?

The reason I ask this question is, that about ten years ago I saw some sections of lungs made for Dr. Thomas in certain investigations he was making at that time, and to me the observations were interesting. I found, for instance, that where guinea-pigs were breathing dust-laden air in an improvised apparatus for a period of forty-eight hours the endothelial lining of the air vesicles was in many instances two layers in thickness, in others three or four, and in still others as many as twelve layers in thickness, which suggested that mouth-breathing might produce changes in the endothelial lining of the air vesicles which would account for the diminished interchange of oxygen and carbondioxid which normally takes place through the vesicle walls.

Dr. Ingals says he does not believe in removing obstructions in the nose unless they materially interfere with respiration. I believe he would modify that statement somewhat if he thought of the function of respiration. The function of respiration is not simply to furnish oxygen and moisture to the lungs, but a very important function of respiration is to aerate or ventilate, as Dr. Pynchon has expressed it, the accessory sinuses of the nose. There are certain obstructive lesions high up in the nose which would not interfere with respiration at all, but which do interfere with the ventilation of the accessory sinuses and lead to lowered vitality and to infection of those sinuses.

I have been much interested in the thesis of Dr. Anderson, because while he says it is not conclusive, it is suggestive. The broad deduction he makes from his experiments is that there is a lowered resistance of the mucous membrane of the respiratory tract; hence a predisposition to infection and inflammation in various parts of the body. I infer he would include in these inflammations the sinuses surrounding the nose as well as the organs in remote parts of the body, as the lungs, kidneys, and so forth. Of course, in these experiments we have to deal with an acute obstruction which is rather contrary to what we find in practice; hence it is difficult to draw conclusions therefrom. In our clinical experience we rarely find acute obstruction of the nose. They are usually obstructions that have gradually developed, and hence the patient develops a degree of immunity which enables him to tolerate the condition much better than any animal would an acute obstruction. Persons with nasal obstruction may go on in comparatively good health, but it must be remembered that these obstructions are likely to bring about infection and inflammation of the sinuses, particularly where they are situated high up in the nose; whereas if the obstruction is located in the lower part of the nose, we have simply a catarrhal inflammation, namely, a turgescent rhinitis, or hypertrophic rhinitis. This is a point which I was in hopes Dr. Anderson would bring out in his investigations. Unfortunately, from my standpoint, he has only dealt with complete obstruction of the nose. It would be interesting for him or someone to experiment with high and low obstructions of the nose. Anterior obstructions of the nose have a different effect from posterior obstructions, on account of the rarefaction of the air posterior to the obstruction. This rarefaction of the air produces a hyperemia of the tissues, leading to turgescence, and finally to hypertrophic rhinitis. In my clinical experience and observation, the obstructions of the nose which interfere with ventilation and drainage of the sinuses are those that are situated high up, and until the submucous resection operation came into vogue, most of us, I think, were in the habit of neglecting the obstructions of the nose situated higher up, and failed to realize their importance. At least, that was my experience. By the submucous resection of the septum we are able to correct the higher obstructions much more easily than formerly. I have been much impressed with my observations with reference to high obstructions, and I have come to believe that



it is not those obstructions of the nose that interfere with general respiration that are of greatest importance, but that those obstructions which interfere with the proper ventilation and drainage of the sinuses are of much greater clinical importance as they lead to infection and inflammation of the sinuses.

Dr. Joseph C. Beck:—I did not expect to be called on to say anything in reference to this paper, and I do not think I can add anything to it, as I have had no experience with experimental work on this subject. I would like, however, to say a word or two in connection with the effect on the general condition of patients from non-obstructive lesions of the nose, that is, atrophic conditions. A patient may have a cavity large enough to pass a small finger and yet may feel that he does not have sufficient room for full or free respiration. He may not have a sufficient amount of proper air, and as a result such general conditions are noted as have been described. There may be absorption of septic material. It is to be hoped that some light may be thrown on the conditions by experiments which we find in patients who have had atrophic rhinitis and in whom lung changes have subsequently been found. It is not uncommon to find chronic capillary bronchitis and inflammation of the vesicles postmortem in the class of patients that have been referred to. From my personal observations upon partial obstructions of the nose, I have come to the conclusion that complete occlusion of the nose is not necessary in order to have certain injuries or deterioration in the general economy of the individual.

Dr. Charles M. Robertson:—There are a certain number of cases of bronchitis and asthma that are caused by obstructions of the nose. We can divide them into two classes. First, those that are reflex, and, second, those produced by direct obstruction other than reflex. In the reflex cases the trouble is caused by the obstruction being in the upper part of the nostril. I have observed several cases of asthma and bronchitis which were relieved by operative procedures on the lower turbinated body, and the lower turbinated body is not a body, as we understand it, that produces reflex disturbance in the lower respiratory apparatus. It seems to me, that children, who have obstructed nostrils, whether from enlargement of the inferior turbinate, or a marked deviation of the septum low down, or whether they have obstruction in the naso-pharynx or fauces from enlarged faucial tonsils are liable to have chests that are narrow with high scapulæ, and as the result of this these children often develop curvature of the spine. This fact has been well authenticated and should receive the attention of the general practitioner as a preventive to disease of the pneumatic apparatus.

Dr. Edwin Pynchon:—In reading the writings of British writers we often run across the expression, "the breathway" of the nose. In other words, they consider that if the nostril has sufficient patency it is satisfactory. In a study of nostrils we find too much space is just as bad as not enough space, and that practically one-eighth or three-sixteenths of an inch is about the maximum amount of space which we find in any part of the normal nose. If the space is greater than that, trouble ensues, and it does so in this way: the air which is passing through is not in a thin enough column to be exposed to the nasal mucous membrane, and consequently is not warmed the same as it would be if passed through a passage more narrow. Furthermore, the larger stream of air does not absorb sufficient humidity from the mucous membrane lining the nose, and consequently is not as well prepared for the lungs. To all intents and purposes, if each nostril consisted of a slit reaching, we will say, from the chin to the forehead, five inches long, and one-eighth of an inch in width, the probabilities are a slit of that style and shape would carry out the normal functions of respiration as well as the nostril in the shape that it is, but for various reasons Nature has seen fit to give us a differently shaped nostril. At the time patency of the nostril is present you may get enough air through the lower part of the nose, while there is a higher part of the nose through which the air does not go. As secretions form in that part of the nose just the same, and as the air does not pass through, those secretions are not evaporated, but deteriorate into a catarrhal discharge, therefore an obstructed nostril is a detrimental condition which must not be overlooked.

As regards these innocent little spurs that some do not like to remove, I have had occasion to examine a good many nostrils, and I do not find a nostril decorated with spurs which is also blest with a normal color of the mucous membrane. In other words, these spurs, even though they do not produce obstruction, produce something which is just as detrimental, and that is deviation of the air current which strikes the spur first and is then caromed off so as to strike the opposing turbinal. The deviated air current in that way has an irritating effect on the mucous membrane of the nose.

Dr. Ballenger has very nicely expressed my views as regards the detrimental features of occlusion of any part of the nose, particularly an obstruction situated high up, so that I will not add anything to what he has said.

Dr. Anderson (closing the discussion):—I see the trend of the discussion is entirely along clinical lines. I hardly touched on that side of the subject, although it is the phase that interests me greatly. In a few weeks I expect to read a paper before our local society, taking up the clinical side of the subject, and drawing conclusions from my experimental work.

If I understood Dr. Ingals rightly, he interprets my work on dogs a little differently than I do. He spoke of how well the dogs get along in breathing through one-fourth of the normal space; that they are able to breathe through a small contracted orifice rather than open their mouths, perhaps he overlooked the fact that they all show local and constitutional symptoms, and a lack of resistance due to the nasal obstruction. I feel that our patients, just in proportion as they do not breathe through the nose, are prone to have certain pathologic conditions develop. Of course, that brings up the question, What is normal breathing? That is difficult to decide, but when a patient repeatedly catches cold, and has a catarrhal discharge from the nose into the throat, and has more or less huskiness of the voice, one will almost invariably find that such an individual breathes more or less through the mouth. If I understand Dr. Ingals rightly, he believes there are many human beings who breathe through the mouth without suffering any injury. I can not agree with that statement. I agree with him perfectly that a sudden nasal obstruction will produce more marked symptoms than one which comes on gradually. Patients who have gradual obstructions of the nose accommodate themselves to the changed conditions, but they are below par as the result of air hunger.

Dr. Ballenger mentioned a change in the endothelia. This is an interesting point, and it is one in which I have been interested, although I can not now make any definite statement more than to say that the epithelial cells of the alveolar walls are increased in a number of my specimens. I have commenced recently to study the changes in the ciliated cells of the trachea and bronchi. That idea came to my mind last winter, from reading the experiments of Calmette, of France, who has infected lungs through the intestinal tract. Calmette believes, for instance, that anthracosis, instead of being due to the inhalation of dust, is due to particles of carbon being absorbed from the intestinal tract. The committee of the Royal Society failed to confirm his observation. Several Germans who made experiments likewise failed to confirm his observation. Thus some believe that these diseases come from the inhalation of dust; and others that they come from absorption through the intestinal tract. These varying results may be influenced by the changes that take place in the ciliated cells. We know that certain diseases of the respiratory tract are followed by loss of the ciliated epithelium. When the ciliated epithelia are lost, infection probably takes place more readily.

I am trying to make some observations to see whether the ciliated cells are affected by obstruction of the nostrils, and mouth-breathing. Of course, the work will require great technical care, and so far I am not in a position to make any definite statement.

In regard to atrophic rhinitis, I should look upon it as causing trouble in the parts below, partially at least from the air not being properly warmed and moistened, as Dr. Pyncheon states. I should say that a too open passage might be just as injurious as a too narrow one.

I wish to thank the members of the Society for the courtesy I have received, and for their free discussion of my paper.

#### ORCHIDOPEXY; A NEW OPERATION.

GUSTAVUS M. BLECH, M.D.

CHICAGO.

The subject of orchidopexy has received but scant attention in recent surgical literature. When we consider that the incomplete descent of one or both testicles means much to the afflicted individual, not only from the standpoint of physiologic function but also because undescended testicles are apt to become malignant, not to mention the disagreeable symptoms which both ectopia and incomplete descent are frequently responsible for, this step-motherly neglect appears astonishing.

Perhaps the reason is to be found in the many failures which have been experienced in the surgical treatment of this not infrequent anomaly, since Schuciler first suggested the operation of orchidopexy.

I shall not annoy you with lengthy repetitions of what can be found in standard treatises on the pathology of undescended or ectopic testis but proceed to consider the operative technique of orchidopexy.

The failures of the simplest method, consisting of cutting down on the displaced organ and fixing the replaced testicle to the fundus of the scrotum, are due to the fact that these fixation sutures can not withstand the tension exercised by the cord. In a short while after the operation these sutures, no matter how deeply placed, are found to have given way and the testis returns to its former anomalous position.

This tension is due to adhesions and to traction on the part of the structures surrounding the cord.

Bevan ingeniously overcomes this by a well-devised plan of liberating the cord from these adhesions. He even does not hesitate to sacrifice the veins, which he considers partly responsible for the shortness of the cord, and a division of which enables the operator to place the cord without undue traction into the scrotal cavity.

If we consider that the undescended testis in individuals over four years old is usually found to be atrophic it seems reasonable, theoretically at least, that such extensive dissection and interference with the blood supply is apt to be followed by still further atrophy, otherwise Bevan's operation would be ideal.

Beck, of New York, suggests an ingenious method. He liberates the cord and testis in the usual way, "dissects a flap from the outer margin of the inguinal ring downwards and turned in such a manner that it can be attached to the opposite layer in a semilunar shape. The band surrounds the testicle like a necktie, the testicle being retained as in a buttonhole."

That this operation produces an alteration in the external wall of the inguinal canal, including the external ring is evident. The testicle is not low down in the scrotum but immediately beneath the newly created external ring. Although Professor Beck looks on either as no objection, I fear very much that this operation, ingenious though it be, is not altogether ideal.

Katzenstein, of Berlin, secures the testicle by a cutaneous flap from the neighboring thigh. I do not think such an operation can be considered ideal for obvious reasons.

Another method that has been advocated is the piercing of the scrotal fundus, pushing the testicle through the opening and holding it there until it is found that the tension has been overcome. This means that the testicle is kept for a time extra-scrotally. This seems to me a decidedly unsurgical procedure.

I present to you a boy over 14 years old, who has suffered from monorchism of the inguinal type. There were prominent subjective phenomena, and the family was anxious to have the anomaly corrected and sent him to the hospital June 30, 1908. I operated on him the next day. The testis, extremely small and tender, as compared with his normal one, could be felt in the inguinal canal about two centimeters above the external ring. An attempt to dislodge the testicle caused intense pain and failed. I exposed the inguinal canal in the same manner as is practiced in the Bassini operation for inguinal hernia. The upper incision does not reach to the internal ring. It did not prove necessary in this case, because I could easily divide the few existing adhesions after widely separating the margins of the divided aponeurosis of the external oblique. The incision was not carried down half way through the long axis of the scrotum and a bed for the testis and cord prepared with the fingers. It was then noticed that there was enough tension to retract the testis no matter what sort of suturing would have been resorted to. In fact, the testicle and the cord were so small and atrophic that, had I not promised to do an orchidopexy, an extirpation appeared to me as the operation indicated.

I decided to fasten the testicle after Beek's method, but modified it in so far that a flap sufficiently long was dissected from the tunica dartos, and after applying this strip around the cord above the testicle in the same fashion as a ligature, fastened the free end of the strip to the attached portion by a few silk sutures. The external wound was closed by a continuous suture of silk, after closing the aponeurosis with catgut. Healing took place per primam.

It is now over three and a half months since the operation, and on examination we find the testicle well retained in the scrotum. The boy has no pain, and except for a trifling infection of the cutaneous wound at its upper part, the result, it seems to me, is ideal. I palpated the replaced testis immediately after the operation before the dressings were applied, and, unless I am greatly mistaken, it seems to me that the organ has become larger. Possibly the increased circumference is due to inflammatory products.

It seems to me that the technique employed in this case should prove of some usefulness in similar cases, especially when the operation is done in early youth, as it should be done.

I can not and do not claim that this, or, for that matter, any other method is applicable to such cases in which the cord is so abnormally short that no method of dissection will enable us to displace the testis. In such cases, of course, castration is to be considered.

#### DISCUSSION ON THE PAPER OF DR. BLECH.

Dr. Gustav Kolischer:—As a rule, a man is taken at a disadvantage if he is asked to discuss and to theorize on an operation that is new or modified; but the cases of undescended testicle have been so thoroughly threshed out in the recent literature that it is very easy to get the leading points. It seems to me the discussion of this paper may be confined to two points. One is that we must gradually free the testicle so as to make it movable and bring it down to the normal site, and the other is, how to retain the testicle or to make it possible for the testis to stay there. Even the name orchidopexy is entirely erroneous because there is no way of stitching the testicle without a flap to the scrotum if the conditions are not such that the cord or blood vessels are long enough to give way. Any method that makes use of a flap, no matter from what point it is taken, for the purpose of bringing down the testicle and retaining it in the scrotum, must be a failure sooner or later. Even if the stitches do not give way, the scrotum will do so.

It was Bevan, I think, who first pointed out the possibility of bringing down the testicle in a large percentage of cases, saying that it is not due to the shortness of the cord, but to the shortness especially of the spermatic artery and vein. His observations on this subject were backed by physiologic investigations and anatomic research, and he does not hesitate to sacrifice, if necessary, enough of



the blood supply to keep the tissues of the testicle alive, if left at all. The formation of a bed for the serotum was pointed out by Bevan in an aseptic manner by not incising the serotum, and the same method was followed by Bayer.

We can only talk about the cure of undescended testicle when it is possible to differentiate the testicle and the cord outside of the inguinal canal. If that is not possible, then operation is a failure, because even for three months in a young individual, or a few weeks in an older individual; the testis will stop outside of the inguinal canal; it will be pulled up into the inguinal canal, and the patient will suffer to such an extent that we have to remove the testicle; consequently, I can not agree with Dr. Bleeh that the operation he has employed in this case is a success. The testicle is away up close to the inguinal canal, so that it is impossible to differentiate the cord from the testicle in the serotum. If the vessels are short, no flap, wherever taken, will make this shortness sufficient. A loop is not stretched by placing it from a flap, or by tearing any kind of tissue around the testicle. It is a misconception that it is possible to keep a testicle in the serotum if the cord or any of the tissues leading down to the testicle are long enough.

Dr. Louis Thexton:—I do not entirely agree with Dr. Koliseher, for the reason that if the testicle is held down for a certain length of time, and not allowed to go back into the inguinal canal, some adhesions will form which will help to keep it down afterward. There is no doubt but that the contraction of the connective tissue draws the cord up, not the vessels alone, but the connective tissue surrounding the blood vessels and making up the cord, and not only the blood vessels but the vas deferens. In a paper which I read (I do not know whether it was an article by Dr. Bevan or not) we were told that in every case of undescended testicle we would find a folding of the vas deferens in dissecting down upon the tissues. I found this in three successive cases after reading that. These were all cases in adults, and I found that condition existing in every one of them. It was not the strength of the vas deferens *per se* which held it up, but the connective tissue which holds the folds of the vas deferens together, and when I loosened that connective tissue from the vas it was not necessary to sever the spermatic vessels because the testicle was easily brought down in position in the serotum.

In Dr. Bleeh's case, which is a boy under puberty, and which I have not had a chance to examine yet, we may find the testicle will go up again, but I believe the method he has employed of using something to hold it there will at least help to keep it there for a while. I have not had much experience in these cases, having operated on but five cases. Two of them were children and both were complete failures. The other three were adults, and these were successful. In those three I followed the operation of Bevan exactly, because I operated after he had written his paper. I think it must have been his paper in which he spoke of the folding of the vas deferens. Of course, it is necessary to separate the connective tissue, because there is nothing that will withstand contraction of the connective tissue, whether it is a flap from the thigh or from the serotum. The serotum may be inverted by the contraction of the cord, or the new connective tissue may give way before it. My personal experience in operating on young people in this class of cases has not been favorable; but that has not been the experience of others, and while I would be willing to operate upon a child, of the two I would prefer to operate on the adult. There is no great effect produced upon the mind of a patient before the age of puberty, and that is one of the reasons for doing this operation.

Dr. Arthur Dean Bevan:—I think the subject of treatment of undescended testis has been as thoroughly worked out as that of the radical cure of hernia, and I believe we have an operation which is just as successful for the treatment of undescended testis as is the Bassini operation, for instance, the radical cure of hernia. It began with Max Schüller, who pointed out that the most important factor in bringing the testicle down into normal position was the tunica vaginalis, that is, the funicular process, and he divided this transversely just below the

external ring, and then ligated the stump as you would in a hernia, and brought down the testicle, with this divided tunica vaginalis, into the scrotum, and held it there by stitches. But that operation was not a great success in a large proportion of the cases. In some it worked well. I took up this work in 1898, and added to it three distinct factors. First, Max Schüller did not make a tunica vaginalis for the testicle. I have done over fifty of these operations, and the Mayos have done more than that. They have adopted my operation. We have found it important to have a tunica vaginalis if we want to have a normal result, and not have a mass of connective tissue in the scrotum. The second point was to devise a method of bringing the testicle down into the scrotum so that there would not be any tension whatever; separate the funicular process transversely to the external ring, ligate the stump as in a hernia, save the rest of the tunica vaginalis, sew it up with purse-string suture, making a definite tunica vaginalis for the testicle; then divide all connective tissue above the cord, make a little pocket in the scrotum with blunt dissection, bring the testicle down so completely that you can easily lay it on the bed opposite the bottom of the scrotum, before you try to put it in the scrotum. It is as lax as that if the thing is properly done. Incision should never be made in the scrotum; it should never extend below the external ring; the testicle is put in the pocket of the scrotum, and retained there by purse-string suture at neck of scrotum.

With reference to the division of the vessels, we have found that out of fifty cases there were six or seven in which we could not bring the testicle down into the scrotum without any tension unless we divided the vessels. We have not hesitated to do that, and we have not had a single case of atrophy of the testicle or any evidence of interference with function. We did that on the basis of well-worked-out laboratory investigations and clinical results, as Dr. Kolischer has pointed out, obtained in connection with the treatment of varicocele. In the operation for ordinary varicocele, where you ligate the separate artery and vein, how many of you see atrophy? It is a rare thing. The operation requires in the adult about the same technic as for a Bassini operation. In a child under 10 years of age, or under the age of puberty, you want to use small instruments; the dissection is much more delicate and difficult, and yet can with patience be carried out, and I am rather inclined to believe from recent work that it is much better to operate on children before puberty than afterward, and have the testicle well down in the scrotum at the time puberty occurs. I can assure Dr. Blech that we have at least forty cases in which it would be difficult for him to determine that any of them had ever been operated on.

Dr. Carl Beck:—I wish to speak of one or two points that were not mentioned by the essayist. It is the consensus of opinion at present of all surgeons that orchidopexy is a plastic operation which should not be done for cosmetic reasons alone. The first point, therefore, is with reference to the indications for this operation. These indications are drawn very carefully in a paper recently published by Lotheissen, in the *Zeitschrift für Klin. Chirurgie*. In this paper he points out that unless symptoms are present that there is a hernia with the undescended testicle or pain, or both, the operation for cosmetic purposes should not be undertaken, and only those cases should be operated on where the testicle is in the inguinal canal. It is barbaric to remove the testicle, which Kocher and others have refused to do, and which everyone else refuses to do now, since the operation can be done successfully by the methods of Bevan and others. The testicle can be brought down, carefully fastened to the scrotum, and should not be removed. If the cord is so short that it can not be brought down, it should be placed in the abdomen intraperitoneally. Only those cases ought to be operated on in which true indications exist.

Dr. Blech (closing the discussion):—I wish to say that part of my paper was evidently misunderstood. I did not endeavor to give the exact technic of Professor Bevan's operation; but the criticism I offered was with reference to the division of the blood vessels. I am sure I saw in the literature reference

to the effect that in some cases atrophy followed the division of the arteries. I believe Dr. Thexton was present at one time when a surgeon in operating for varicocele cut the artery and atrophy followed. At any rate I can not help but look upon division of the artery in an operation for varicocele as a surgical blunder. As regards the technic, it is a problem which must be solved by an appreciation of the nature of the anomaly—if it were true that the blood vessels alone are responsible for the shortening of the cord, then, of course, all further arguments are unnecessary, but it seems to me, most men who have done research work, have come to the conclusion that it is not only a mere matter of blood vessels and connective tissues, but of the entire peritoneal sheath covering the cord. When we find already a condition of atrophy, like in my case, where everything is very thin, we practically have no organ to work on, making the stripping of the tunica vaginalis and peritoneal pouch a rather delicate task. Of course, adhesions must be relieved. There is no question but that the testicle can be put in the scrotum and held there below the external ring by my method. Whether it lies close to the external ring or very low in the scrotum matters very little.

As regards the indications for the operation, malignancy is not the only indication; pain and annoyance are sufficient indications, but even if they be absent I can not agree with Dr. Beck that an operation is contraindicated because Kocher and others have reported comparatively large numbers of malignancy. The operation, therefore, becomes a preventative one.

#### NORTHWEST BRANCH.

The second annual meeting of the Northwest Branch of the Chicago Medical Society was held at the Northwestern University Settlement Building, Augusta and Noble Streets, Friday evening, Nov. 6, 1908, at 9 p. m. The program of the evening was a symposium on "Syphilis." Chas. E. Fischer read a very interesting paper on "*Spirochæta Pallida*," explaining the chief characteristics of the spirochætæ and demonstrating them under the microscope. E. A. Fischkin spoke on diagnosis and showed photographs illustrating the differential diagnosis in unusual cases. Arthur A. Stillians read a very concise paper on treatment, mentioning the best means for prevention and Metchnikoff's calomel ointment, and told of its use in the German army, discussing the newer treatment with atoxyl. R. S. Michel showed a case of Charcot's joint affecting the right knee. The discussion was opened by W. J. Anderson and followed by F. H. Harris of the West Side Branch. There were 42 members present.

#### THE TREATMENT OF SYPHILIS.

ARTHUR W. STILLIANS, M.D., CHICAGO.

(Abstract.)

#### PROPHYLAXIS.

First in importance is education. It must be done and on a much larger scale than at present. The education of the already infected, aside from their disastrously acquired experimental knowledge, the education of children at puberty, of factory employes, and of the general public. The time is past when the people can be allowed to remain in ignorance of scientific facts of such vital importance.

Police regulation of prostitution seems to have proved of slight value; but I believe that the health department can and should be cognizant of every case of syphilis known to the profession, and by a careful oversight, respecting so far as is possible the feelings of the unfortunate victim, prevent in large measure the spread of the disease. According to the new city ordinance regulating dispensaries, they must report each week all cases of syphilis and gonorrhea treated by them. This law marks the beginning of a campaign against syphilis, far more successful than any waged in the past. The compulsory examination of all

prisoners, beggars and tramps, and of all employes of any trade like glass-blowing, in which there is danger of infection of the innocent. Allied to this and also to the educational method, is the need of greater facilities for the treatment of syphilitics and for the study and teaching of syphilography. The lessening of quackery in this most fruitful field for quacks will save many a gullible person an expensive course of unnecessary treatment, will thus lessen the popular idea that syphilis is easily cured, and will give many a sufferer the prompt energetic treatment that he needs, to save himself and others. Social reforms, by providing a more easily acquired education, cleaner and better living, and a greater possibility of early marriage will lessen prostitution and its evil results. A French authority estimates that in Paris one-twentieth of all abortions, one-fifth of all the deaths in the first two weeks of life, and one-tenth of all in the first two years, are caused by congenital syphilis. The careful instruction of syphilitics on this subject, the thorough treatment of both husband and wife, and the energetic treatment of the pregnant woman, especially before the fifth month, even though she shows no active evidence of the disease at the time, will cut down this mortality. The need of means of tracing up all active cases and thus protecting from infection the innocent and assuring treatment for those already exposed, is nowhere more apparent than here.

It has often occurred to me as wonderful that the infection of the innocent from public towels and cups occurs so seldom, considering the number of cases with mucous patches that use no precautions whatever to protect others. This is explained by the fact that syphilitic secretions lose their infectiousness in from sixteen to twenty-four hours when moist and in six hours when dry.

A 30 per cent. ointment of calomel has been found by Metchnikoff to be an efficient preventive of syphilis if rubbed into the site of inoculation within a few hours, six at most, after infection.

#### TREATMENT OF PRIMARY LESION.

In spite of all this testimony that the virus very soon extends so far into the tissues that it is beyond the limits of a wide excision, many good authorities advocate the resection of the chancre wide of the induration, when it is situated on the prepuce and if seen before it is a week old. If cleanly done and carefully sutured it does no harm, and no one can deny must do some good in removing the chief source of infective material, though we can not say the only source. When the chancre is on the glans or some some extragenital site where its removal would disfigure, the calomel ointment is possibly the best application.

#### CONSTITUTIONAL TREATMENT.

Mercury is the great specific for syphilis. Its work is accomplished apparently not by killing the spirochæte, but as a milder antiseptic which inhibits the proliferation of the spirochæte and so holds the disease in check, while the tissues are engaged in the exceedingly slow elaboration of specific antibodies. Our aim in giving mercury, then, must be to saturate the patient with mercury as soon as possible after the diagnosis has been definitely made, and then to keep his tissues flooded with the drug just short of the amount which poisons him. The quickest and most reliable methods of accomplishing this are by inunction or intramuscular injection. If carefully given, I believe the injection of soluble salts as safe as any method. There are several excellent formulas, the one I prefer being a 2 per cent. solution of mercury cyanid, with 1 per cent. cocain. Of this solution, the beginning dose is  $\frac{1}{4}$  to  $\frac{1}{2}$  cc., rapidly increased. Injections are made every three days. If for any reason the injections are refused, inunctions may be substituted, beginning usually with 2.0 to 4.0 of the blue ointment diluted with an equal amount of lanolin. By these methods the patient is soon brought to the point where mercury is eliminated so rapidly in the gastrointestinal tract as to cause irritation of the tissues. To prevent these signs of saturation occurring too soon, the mouth must be carefully put in order



at the outset. The internal administration of mercury is by far the most popular in this country, and is no doubt an efficient method if as carefully managed as the methods already mentioned must be. But the dose must be kept at the highest that the patient can stand, only a little below that which causes slight irritation.

This, the "tonic dose" of Keyes, can be kept up steadily or an occasional change may be made in the method of administration, or an intermission of treatment allowed, especially if the injection method be employed. Tonic of iron, strychnia, arsenic or quinin or combination of these must be freely used when indicated, preferably during the intermission in the mercurial courses.

Arsenic is being brought forward as a specific, which it no doubt is to a certain extent. Metchnikoff finds that a dose of atoxyl of three centigrams per kilogram of body weight, injected within fifteen days of inoculation, will prevent absolutely the development of syphilis. This dosage, averaging two grams for an adult of medium weight, divided by Hallopeau into successive doses several days apart of 0.75, 0.60 and 0.50, has been given to infected humans without signs of intolerance, though the drug in other cases (given in other diseases of the skin) has produced poisonous effect ascribed to its aniline element. Quinin, also, has proved of great value in dispelling specific lesions. It is given by the Lenzmann technic intravenous injections, doses of  $7\frac{1}{2}$  grains on two successive days, then four doses of 9 grains each at four-day intervals. At the same time he uses nucleinic acid to produce a leucocytosis, giving it in an olive oil suspension with quinin by intramuscular injection.

#### TREATMENT OF TERTIARY LESIONS.

For all gummatous lesions, whether they occur early in the disease or late, the iodids and pre-eminently potassium iodid, are the great resources. They should be given vigorously in doses large enough to reduce the lesions. After the continuous administration for a time, and the control of the lesions, there should be an interruption of the iodids to avoid a tolerance for the drug being established. In a great many cases, gummatous lesions yield more readily when mercury is given along with the iodids.

#### DURATION OF THE TREATMENT.

Most authorities agree that a three-year course is practically safe, though nearly all unite in advising short courses in the years following, in order to "make assurance doubly sure." During the third year the iodids are given, even though there are no special indications for them, with the idea of a prophylaxis of tertiary lesions. The influence of the Wasserman test upon the treatment consists entirely for the present of diagnosing latent, or doubtful active cases, and eliminating to a large extent the necessity of the so often unsatisfactory therapeutic test. We may all hope, however, for valuable testimony to the value of our treatment, and the final cure of the disease, if any there be, from these investigations of the syphilitic antibodies.

#### SUMMARY.

1. Make an early diagnosis and begin treatment early, pushing it vigorously.
2. Excise the primary lesion if preputial and less than a week old.
3. The use of the 3 per cent. calomel ointment is an efficient abortive if used within an hour after suspicious intercourse.
4. Iodids should be reserved for gumma and visceral lesions, early or late, and for the latter part of the regular course.

#### HYPEREMIA.

II. J. BURWASH, M.D., CHICAGO.

(Abstract.)

Hyperemia may be divided into two forms: physiological or natural, and induced or artificial. In the former, all organs that functionate become hyper-

emic during their active periods, as shown in Nature, both in the functions of each individual organ and that of growth and regeneration of tissues. Bier's attention was drawn to the fact that all tissues become hyperemic in Nature's efforts to restore its equilibrium, or get rid of the offending causes, and consequently he decided to imitate Nature's method by also inducing more blood to the affected parts, and to accomplish this he adopted the active or arterial, as that induced by hot air, through hot-air boxes or machines, and the passive or obstructed method as accomplished by a cupping glass or by stasis bandage, the latter applied at a point above the part to be treated. When a limb or a part is subjected to a hot-air treatment or submitted to the radiant heat of an electric light, the heat first causes a stimulation of the sensitive nerves, which causes dilatation of the blood vessels, and Professor Bier's assistant, Dr. Klapp, has demonstrated that this dilatation not only affects the superficial vessels, but extends throughout the entire thickness of the limb to the vessels of the bone itself. Dr. Klapp in his experiments by placing a rabbit in a hot-air apparatus also demonstrated that the blood supply of the viscera could also be increased. The effect, then, is to cause sweating and an active increase in both the volume of the blood and the rapidity of motion. A rubber bandage is applied above the place which is to be rendered hyperemic, in several turns covering each other firmly enough to compress the weaker walls of the veins, but not the harder ones of the arteries, thus according to the firmness of the applied bandage any degree of stasis hyperemia can be produced. The following phenomena must be observed: 1. The part distal to the bandage swells and becomes red and retains its warmth. 2. The pain is relieved. Should the part become cold and blue, the bandage must be loosened. 3. The bandage is not kept on continuously, but removed from time to time and reapplied in proximity rather than over the original site. If a wound is under treatment the usual pre-antiseptic methods are carried out. 4. When vermilion spots are produced in large numbers in an extensive area, the stasis has been intense and excessive, and this should be avoided. Intense stasis is a very dangerous agent for the limb because it leads to considerable reduction of the temperature. Bier has termed this degree "Cold stasis." 5. The stasis must never produce inconvenience, pain or hyperesthesia in the treated limb. The patient who wears the bandage must suffer so little difficulty from it that while following his usual occupation he forgets its presence, for a vigorous hyperemia will be induced, especially in inflamed parts of the body. Bier states that stasis hyperemia never produces varix peripherically; when it is produced there exists in addition an affection of the wall of the vein. He has demonstrated that both forms of hyperemia, active and passive, can be produced by the suction apparatus, and he has termed it mixed.

#### GENERAL EFFECTS OF HYPEREMIA.

First, the most striking is the relief of pain. The second quality of this treatment is that it restores mobility to stiffened joints. The irritation of the nerves in the joint is lessened and the contraction of the muscles is relaxed. The bactericidal effects of hyperemia, Notzel has demonstrated. (In 1901 I reported a series of cases of acute localized and septic diseases, viz., pneumonia, appendicitis, osteomyelitis and pleurisy treated by the application of the superheated dry air with beneficial results. I believe I was the first to treat by this method the above diseases, but of course the term "hot air" was used in place of the present name, hyperemia.) Practically, I have found that the most useful method for producing the purest form of hyperemia is by incandescent or arc light apparatuses. Besides the heat the different light rays are brought into effect. Active hyperemia is used in the treatment of those diseases in which the absorbent effect is principally desired, as in chronic affections of joints, trauma, gonorrhea, stiffness or anklyosis from rheumatism, chronic effusions, edema following fractures, thromboid varicose veins, pleurisy with effusion, delayed resolution in pneumonia, adhesions especially in pelvic viscera.

The influence of hyperemia on regeneration. Experiments by Ambrose Paré and others have shown that retarded formation of callus can be largely increased by adoption of artificial venous hyperemia. Inflammatory foci and soft tuberculous inflammations can be converted into scars. This transformation plays an important rôle in the cure of infectious diseases.

Professor Bier believes a rapid cicatrization of inflammatory foci incapsulates the bacteria and renders them harmless. We know from experience that Nature makes use of this method.

The application of hyperemia in the treatment of diseases. The author began its use in 1898, first with the Betz hot air apparatus. The diseases which I at first treated were different forms of neuralgias, sciatic and trifacial. For sciatica the best results were obtained when the body machine was used. Here a general sweating was induced and a cure was effected after 20 treatments. Duration of each, 45 minutes, with temperature 300. In trifacial neuralgia the pain was invariably relieved after 20 treatments. Here the high temperatures to the face induced vertigo, and therefore the duration should be limited to 25 to 35 minutes. Profuse lachrymation is induced. In locomotor ataxia I have used both hot air and electric light for the purpose to improve nutrition of the cord. The application is made locally to the spine, while no case has been cured, yet an improved condition with relief of the neuralgic pain ensued. In neuritis electric light with blue screen is the most grateful. To improve nutrition of the peripheral nerves in cases of paresthesia accompanying diabetes, I am using the suction apparatus to the feet and legs. In this case, it is too early to report results. In the venous system hyperemia has long been known to improve varicose ulcers of the legs, and in inoperable cases it is one of the best treatments known, as old chronic ulcers which have continued for twenty-five years have been healed by the hot air apparatus. In acute thrombophlebitis, hyperemia with hot air apparatus applied twice daily for 45 minutes' duration produced brilliant results. I have treated several such cases in typhoid fever patients. The pain is at first relieved, which in itself, if no other benefit was derived, would compensate for its use, but the swelling subsides and the temperature also falls, and the progress of these cases is cut short, and early recovery ensues.

In pneumonia active hyperemia through hot air machine relieves the pain, lowers the temperature, lowers blood pressure in sthenic cases, favors an earlier crisis, and aids in resolution; the latter feature is especially noted in the asthenic type of old people. In pleurisy with effusion, pain is relieved and resorption of the fluid is aided and encouraged, and when tapping is not done, hyperemia applied twice daily will absorb the fluid from the pleural sac even if three-fourths full.

In catarrhal condition of the bile ducts of the liver and gall bladder, hyperemia has produced excellent results. Boils or furuncles can be aborted if taken at an early stage by the active hyperemia of the incandescent lamp and followed by the suction or cupping glass. Mastitis readily yields to active hyperemia. In facial erysipelas the inflammation is prevented from spreading, pain is relieved, and the temperature falls. The disease, if taken early, is aborted. Lymphangitis from local infection is treated with excellent results by the stasis bandage.

Bursitis and synovitis of the knee joint are early benefited by the combined treatment of active and passive hyperemia. The parts to be treated by the suction apparatus should be smeared with vaseline and before and after a treatment should be cleansed with benzine. The cup is applied directly to the affected area. In acute inflammations the air exhausted should be slight, only just sufficient to cause the glass to adhere; in chronic or tubercular inflammations, a greater exhaustion is used, but in neither should pain be produced. The treatment should last three-quarters of an hour daily and even for that time not continuous, but is interrupted every five minutes with a three minute interval, that is, during a three-quarter hour treatment the cups are on five minutes and off three minutes.

Some conclusions derived from hyperemia treatment may be summarized as follows:

First, that hyperemia as advocated and practiced by the Bier method and teaching has been taken from the plane of empiricism and elevated to that of science.

Second, that the application of the congestive bandage appears simple enough, yet so much depends on the correct *principles*, to receive the utmost beneficial results from its uses, the degree of hyperemia and its duration, depends the success or failure of the treatment. It was only after long experience and many failures that Bier arrived at his present technique.

Third, from ancient times cupping has been done to draw the blood away from the affected parts, to produce an anemic effect. Bier has demonstrated that this is a fallacious theory, that cupping, instead of producing anemia, produces the opposite effect, hyperemia of both deep and superficial tissues.

Fourth, that the treatment by active hyperemia of organs deeply seated, as the lungs, liver, intestines, and the other abdominal viscera can be effectually accomplished through its bactericidal effects.

Fifth, that the bactericidal effect of active hyperemia warrants its use in the treatment of localized infectious germ diseases of the internal organs.

#### NORTH SHORE BRANCH.

The meeting of Nov. 12, 1908, consisted of a paper by Dr. C. J. Whalen on The Abuse of Medical Charities in the City of Chicago.<sup>1</sup>

#### DISCUSSION.

The following doctors participated: E. A. Fischkin, chairman of the Committee of the Chicago Medical Society to Investigate the Abuse of Medical Charities; E. L. Kenyon, member of the same committee; J. E. Stubbs, C. D. Pence and G. W. Green, former members of this committee; H. E. Irish, President of the Northwest Branch; also, G. G. Burdick, T. W. Parseche, T. A. Hogan, I. D. Rawlings, T. A. Kreuser, M. A. Griffin, L. Maywit, F. R. Byrnes and A. C. A. Gaul.

The discussion was opened by G. C. Burdick, whose denunciation of the Department of Health turned the discussion into a sharp criticism of the Department. After a time, Dr. Gaul rose to a point of order, maintaining that the remarks were not concerning the subject of the paper supposed to be under discussion. The president sustained the point, and thereafter the discussion was confined to the Abuse of Medical Charities, the following points being brought out:

1. Those serving at free dispensaries are not anxious that only the poor apply for treatment; on the contrary, the well-to-do are welcomed, because they may be sidetracked to become profitable private patients.

2. Many so-called free dispensaries charge their patients fees (ostensibly for medicines, etc.), which amount to a fair remuneration for the services rendered. No objection is made to the doctors because they get a reasonable fee; but they should not obtain money under false pretenses—advertising a “free” dispensary and then in reality making charges.

3. Dr. Byrnes maintained that all beds in all except private hospitals, including ward beds, should be open for the patients of any doctor, whether he is a member of the staff or not. As far as he knew, only one hospital in Chicago is run on this plan.

4. Many instances were cited of patients who entered as “hospital” patients, who were assigned to attending surgeons, and who had their operations performed free of charge, though they were abundantly able to pay. In one instance in this city a prominent surgeon refused to do an operation without a fee for such a well-to-do patient, and he was promptly separated from the staff.

1. For text of paper see p. 1.



5. Corporations came in for criticism, because of the small remuneration which many of them give for contract work. They were defended by Dr. Parsche, who claimed that some of them at least pay but little less than full rates for the services of their physicians.

6. The Department of Health was criticized, especially by Dr. Hogan, for the insufficient remuneration of its employes, especially the Medical School Inspectors.

7. Finally, the discussion crystallized in the following idea, brought out particularly by Drs. Franklin, Irish and Green: *There must be an organization or clearing house (the Bureau of Charities has already offered its services) to which all applicants for free medical services must apply, and by which the worthiness of these must be investigated and approved, before they may receive free treatment.* This does not apply to emergency cases; these may be treated at once. However, these must be investigated later, and if they are found to be able to pay, a bill must be sent to them.

It was the expressed determination of many present to keep this subject agitated till the next meeting and then to take further action upon it. It was suggested by some also that later in the year a meeting of representatives from all of the branches of the Chicago Medical Society be held, and that through this action pressure be brought to bear so that genuine results may be obtained and a *clearing house be actually established.*

Discussion was closed by Dr. Whalen.

WALTER C. JONES, Secretary.

#### CASE OF PLACENTA PRÆVIA CENTRALIS. CONSERVATIVE TREATMENT. RAPID DELIVERY AT TERM. MOTHER AND CHILD LIVING AND WELL.

J. F. HULTGEN, M.D., CHICAGO.

Recent articles upon placenta prævia show such radical tendencies that I wish to report the following case as a mild protest against hasty procedures:

Mrs. A. S., 38 years, housewife; German; three living children, and seven dead of intercurrent infectious diseases. Had four miscarriages of three and five months of pregnancy. Always had tedious labors because dilatation too slow. Is a well-built, well-nourished woman, always in good health. Bony pelvis showed normal proportions.

History of present pregnancy: June 3, 1907, at office, found pregnant in seventh week, consulted because of slight hemorrhage on previous day, after having amenorrhea the two last menses. Curettage for abortion six months ago (a six weeks' pregnancy).

Oct. 19, 1907: Seventh month, severe hemorrhage, continuous, moderate flow from vagina for eleven hours. Occurred at 2 p. m. in bed, without apparent cause. Placental edge felt per os. Fetus in transverse position. Fetal heart sounds slightly perceptible. Souffle heard in left hypogastrium. Patient, weakly, rather pale, dizzy at times, backaches. No uterine contractions. Cervico-vaginal tampon.

Nov. 2, 1907: Moderate hemorrhage, dark blood.

Nov. 4, 1907: Slight hemorrhage, a few clots passed; no uterine contractions. Fetal heart sounds not heard, transverse position yet.

Nov. 30, 1907: Hemorrhage of about one pint dark blood. Consultation, Dr. E. A. Streich. No uterine contractions. Patient rather pale, but keeps up and does her housework entirely, excepting the laundry.

Dec. 6, 1907: Bleeding yet, has been flowing slightly for last six days. A few clots. Abdomen large and square. Fetal movements became more and more marked. Patient gaining in weight. Appetite fair.

Dec. 9, 1907: Small hemorrhage. Piece of placenta hard and calcareous, felt per vaginam. Cervix admits four fingers.

Dec. 29, 1907: Marked hemorrhage, began while patient was in bed, about one quart and a half of dark blood lost in four or five hours. No gushing of blood. Facial expression good. No uterine contractions.

Jan. 7, 1908: Fairly large hemorrhage at 10 a. m. Tampon again.

Jan. 8, 1908: Very severe hemorrhage at 2 a. m. Pulse good, rather slow. Mild uterine contractions. Cervico-vaginal tampon, Dr. Charles Erickson and myself. Case watched and things made ready for immediate delivery if necessary. Cervix admits five fingers, lower uterine segment soft. Moderate bleeding all morning. Patient looks and feels very well considering her losses of blood. Consents to be transferred to hospital. Admitted at Englewood Hospital Jan. 8, 1908, at 2 p. m. Tamponade renewed, cervix dilating, uterine contractions still keeping up. Cephalic presentation, head not engaged. Patient in fair condition. I decided to wait for more dilatation before interfering hoping that the case might possibly terminate by itself. Another hemorrhage at 7 p. m., in spite of a third packing, decided me to deliver at once. (Patient was then two days short of term.)

*Pelvic Status.*—Cervix admits more than five fingers. Placenta forms a complete dome over the lower uterine segment—*prævia centralis* par excellence—slight bleeding from the separating cotyledons. Head down, not engaged. Fetal heart sounds well audible. Patient in good condition.

*Operation.*—Chloroform narcosis, Dr. Starnes; assistant, Dr. Conners, asepsis. Barnes bag found useless. Bimanual digital dilatation according to Harris. Then large, central rupture of placenta and membranes (Puzos method), podalic version, followed by rapid extraction by feet. No trouble with the after-coming head, because it was rather small, and the maternal pelvis rather large. Child 7¼ pounds, in good condition. Placenta then delivered by manual separation and expression. Moderately large hemorrhage at rupture of placenta, but none later.

Puerperium: Uneventful, no infection, no laceration. Complete recovery. Child breast-feeding and healthy.

Reflections about this case: Conservatism has its legitimate place, even in placenta *prævia centralis*. The cervico-vaginal tamponade, when done properly, is useful. It stops moderate hemorrhage, helps to dilate the cervix, and gives the obstetric attendant time to gather his thoughts.

Repeated hemorrhages, if not too large and too closely successive, are the best stimulant for the blood-making tissues. This is proved, experimentally and clinically. Remittent bleeding, therefore, is of itself not a sufficient indication for terminations of pregnancy.

5059 Ashland Avenue.

#### CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

*Meeting of October 13, 1908.*

The President, DR. A. H. ANDREWS, in the Chair.

#### CYST OF EPIGLOTTIS; FOREIGN BODY IN LEFT BRONCHUS; RANULA; PARAFFINOMA.

JOSEPH C. BECK, M.D.

#### RANULA.

Helen G., 8 years old. A swelling in her mouth just underneath the tongue had been noticed for the past year. Teeth very bad, otherwise well. Examination revealed a smooth swelling, filling out the whole floor of the mouth and pushing the tongue upward, thus preventing the closure of the mouth. The swelling is soft and not painful. Diagnosis: ranula, possibly both sides. Figure 1 shows patient before operation.

Under general anæsthetic I made an incision along the floor of the mouth over the greatest prominence of the tumor and resected it submucously, which was not very difficult to accomplish by means of blunt pointed scissors. The

cyst was accidentally punctured, fortunately near the completion of the enucleation. The puncture caused the discharge of a watery secretion. The sac was very easily removed; the wound sewed up. It proved to be only unilateral but extended to the opposite side. I took care not to destroy the normal ostium. The recovery was uneventful. It is interesting to note that these conditions are not common in children. Keen says they are rare in that time of life.

#### CYST OF EPIGLOTTIS.

This child, S. G., 5 years old, was presented by me before this society last year, after I had operated on her and believed the condition to be cured. Briefly repeated, the history is as follows: The child was brought to the hospital by Dr. Merki as an emergency case, with marked choking, due to some



Figure 1.

laryngeal obstruction, which she had had, in moderate form, ever since birth, but the condition had rapidly grown worse during the past week. All I could do was to feel some swelling in the region of the epiglottis and practically do a stabbing tracheotomy. The child rallied and I made a subsequent diagnosis of a papilloma or myxoma with edema of the glottis. About six weeks later I operated by the direct method, using Jackson's laryngeal speculum, and attempted to snare off a sessile tumor, about the size of a large hazel nut. When I put on my fixation forceps I opened a cyst and removed about a dessert spoonful of whitish cystic fluid. The following diagnosis was then made: A cyst of the epiglottis of the left side at the pyriform fossa. I removed as much of the wall as I could and inserted a large cautery point, seared the cavity, and so

expected its obliteration. The child made an uneventful recovery, and her voice as well as her breathing became absolutely normal.

I observed the child for about three months and finally told the mother to bring her back if at any time there were indications of a recurrence of the trouble. Last month she brought the child to me and I found a recurrence of the cyst, although it is not as large as it was the first time, but it appears to have thicker walls. I have certain plans of procedure, which, however, I will not mention until after the discussion, as I hope to profit thereby.

Since the presentation of this case the child has been operated on. I performed an external pharyngotomy, without preliminary tracheotomy, and removed the entire cyst. It originated from the left side of the epilaryngeal space, close to the tongue and a congenital cyst of the thyroglossal variety is to be considered. The child made an uneventful recovery.

### PARAFINOMA.

I wish to present this case with a view of discussing the pathological entity of this so-called neoplasm. It is particularly interesting to the rhinologist who is concerned in the correction of nasal deformities of the saddle or notched variety.

Fischer<sup>1</sup> has called attention to the fact that injections of paraffin have a tendency to cause the formation of malignant disease, and if that be true, then it is very important that its employment should be discouraged. Kirschner<sup>2</sup> says that the termination of the paraffin is dependent upon what consistency of this substance is employed, whether hard or soft, i. e., having a higher or lower melting point, and on the admixture of vaselin. He claims that the softer paraffins are absorbed, while the harder remain always as such and become encapsulated and traversed with new blood vessels and connective tissue. Harmon Smith<sup>3</sup> recently made some histological observations concerning the final results of injected paraffin and finds that the connective tissues traverse and surround the softer paraffins. Schrt.<sup>4</sup> who reviews the literature completely, finds, like Kirschner, the fat formation the most interesting point for discussion and the possibility of serious complications as fat embolism in the later stages of the injections.

Broekert<sup>5</sup> and others are all practically of the same opinion, and they have never reported a case of any malignancy following its application.

Heldingsfeld,<sup>6</sup> reporting two interesting cases and thoroughly reviewing the literature, makes the passing remark, in his histological examinations of portions removed of a "precancerous keratitic formation of the skin overlying these masses, and by analogy believes the same conditions may be going on in the deeper layers.

My personal observations, which date from the time Professor Gersuny<sup>7</sup> first reports on the use of paraffin for correction of external nasal deformities, are the following: That in about 40 cases, injections being made in various parts of the head, and employing the various forms of paraffin, I have never seen anything resembling a sarcoma, clinically. In fact, with the rarest exception of a marked local reaction for a brief period, or a suppuration, I have never had any complication. On two different occasions I removed, without any difficulty, masses which I had injected three or five months previously. Having made a

1. Fischer: *Munchener Med. Wochenschrift*, 1906, p. 42.

2. Kirschner: *Virchow's Arch.*

3. Smith, Harmon: *Transactions of Am. Laryng-Rhino. and Otol. Soc.*, 1908.

4. Schrt: *Beiträge zur Klinischer Chirurgie*, September, 1907, Heft 2.

5. Broekert: *Presse Oto.-Laryng. belge Brux.*, 1906, v, 529-550.

6. Heldingsfeld: *Verhandlung d. deutsch. Dermat. Gesellsch.*

7. Gersuny: *Zeitschrift für Heilkunde*, 1900.



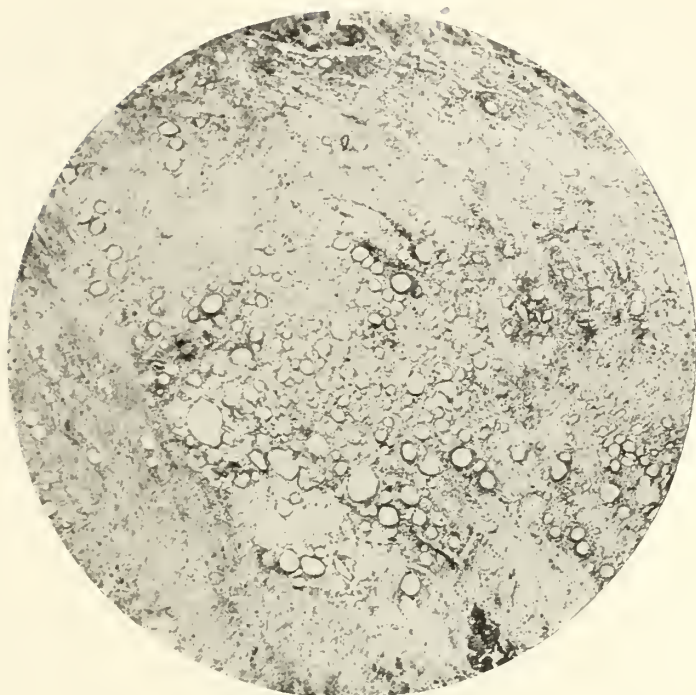


Figure 2 (Low power).

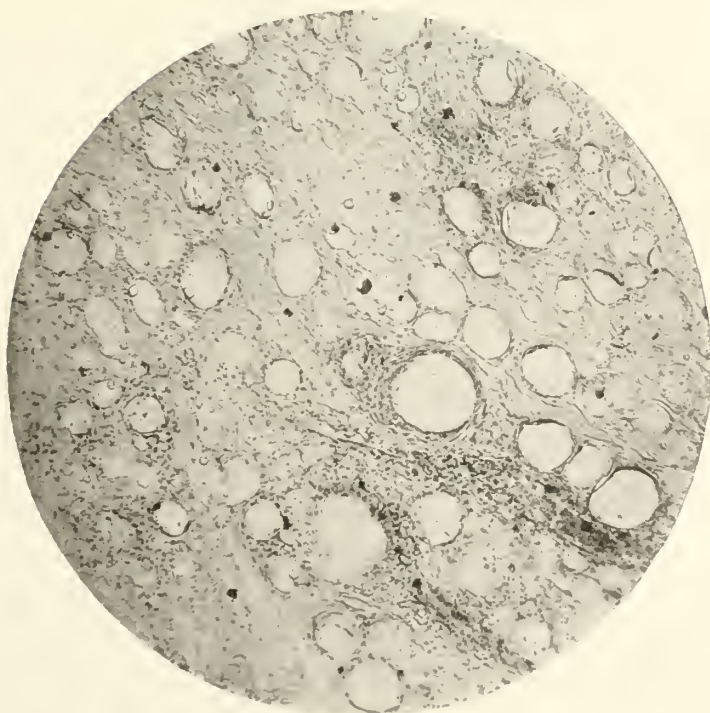


Figure 3 (High power).

small incision and applying pressure, the paraffin would come out in the form of a comedone, with no vessels or connective tissue traversing it.

*History.*—Miss McC., 32 years old, nurse. Had read of the use of paraffin for the correction of facial deformities, etc. Thought she would experiment with herself by employing paraffin to prevent the formation of wrinkles. (It is probable that the patient's mental equilibrium was somewhat effected). She employed a mixture of paraffin and olive oil, 60 per cent. paraffin and 40 per cent. olive oil, the paraffin having a melting point of 110°. She first injected the forehead, then the lower eye-lids, cheeks and neck. She observed that about a week after making the injections the regions became red and tender, and soon thereafter new capillary vessels were seen on the surface of the skin overlying the masses injected. About six months later she consulted Dr. Morris, of New York City, who made incisions into these masses, removing some from the forehead, but stated that he could not remove any of the masses from the face and neck. When patient consulted me, having been referred to me by Dr. Lieberthal, she was extremely nervous and spoke of suicide, complained of radiating pains in the face and about the ears. I found irregularly dispersed masses in the face and particularly large masses in the parotid region of the left side, which were quite firm and adherent to the underlying tissues. A large mass was situated on the left side of the neck reaching down as low as two inches above the clavicle. This mass was quite movable. All the masses had an angry red appearance and the overlying skin was traversed with small capillaries. Long scars showed where previous incisions had been made.

The case seemed to be favorable for colored photography,\* and I therefore had a front and side view taken by the Lumier method for stereoscopic projection, which would show not only the actual colors, but also the amount of swelling. I wish to call attention to this new method of photography, which I believe will be of inestimable value in the demonstration of our work in the throat, mouth and external pathological conditions.

I removed, under local (Schleich) anesthesia, the movable mass from the right side of the neck by excising it completely with the overlying skin, drawing the edges together, and obtained primary union. While removing the mass I came across lumps of paraffin and small quantities of a yellow substance, in liquid form, which I believe was the oil which must have separated from the paraffin. A small piece of this mass was taken for microscopical examination, and it shows (Fig. 3) principally fat vacuoles and older connective tissue with very few inflammatory cells. Nowhere is there any sign of a sarcomatous degeneration nor any sign of such a neoplasm.

#### FOREIGN BODY (TOY INCANDESCENT LAMP) IN LEFT BRONCHUS.

Joe C., 3½ years old. While playing with his sister she put something into his mouth, whereupon he became frightened. He began to cry and cough. The mother at once called a neighboring physician, who attempted to remove the foreign body with his fingers, but failing, he called in two other doctors who endeavored to remove the object by means of forceps, likewise without success. The child was then removed to the hospital as quickly as possible, and I saw it late in the evening of the same day. The patient was in good condition. The mother could not tell me what the child had inhaled or swallowed, but thought that it was the metal cap of her umbrella. The little sister refused to say what she had put into her brother's mouth, and the patient persistently pointed to the gas tip. I decided that a radiogram be taken. The fluoroscope showed the foreign body as located in the left side of the chest, between the sixth and seventh ribs, close to the sternum. Dr. Potter took the radiogram (Fig. 5) with

\* These illustrations were presented to the Society. Any reader especially interested can obtain the colored stereoscopic photographs by applying to THE ILLINOIS MEDICAL JOURNAL or the author.

the patient lying face downward, and this shows an oblong body, about an inch long, in the region above described. I decided that it was the metal cap of the umbrella.

Under general anesthesia (chloroform) and by means of Jackson's speculum I found a slightly traumatized epi-larynx. I introduced a small bronchroscope (Jackson's) and looked in the left bronchus for the foreign body. There was not much congestion nor mucus present (employed 1/300 atropin previous to the operation). Suddenly the light became covered with some mucus and burned out. Replacing another and reintroducing, there again was some trouble with the light, so that I could not see well at all. I then used Kierstein's mirror, which was not much better, and I was forced to give it up. I had not encountered any foreign body and concluded that it might possibly be in the esophagus, which I examined with the aid of Kierstein's lamp, but found nothing.



Figure 4.—Toy Incandescent Lamp. Actual size, five-eighths of an inch.

ing. The child was placed in bed for the night, having decided to wait until the next morning and then again use the fluoroscope to determine whether the object had passed or was still present. The patient had a temperature of 101.2 next morning, but appeared to be in good condition.

The fluoroscopic examination revealed the foreign body in the same position. Through the kindness of Mr. V. Mueller, who loaned and operated the new apparatus of Bruening, I was enabled to do better work during the second attempt. I found a great deal of edema of the glottis, so decided to do a tracheotomy and work through the opening. The introduction of the above mentioned instrument was very easy and illuminated the field very thoroughly. However, I did not find the foreign body where it should be located according to the radiograph, i. e., as low as the sixth rib. Slowly withdrawing the tube, I came upon some projection, and by means of a blunt pointed probe began to in-

investigate it. It appeared to be hard and I thought of a cartilage ring. The child was awakening and began to cough. A considerable quantity of mucus was expelled and at the same time we heard a clicking sound, something had dropped to the floor. The assistant holding the patient's head declared something hard had struck him on the wrist and showed me a blood stain where the object had struck him. Removing the tube and introducing a tracheal cannula, we then looked about on the floor and there found the foreign body, which was a toy automobile lamp. (Fig. 4.) The father, who was waiting for the returns, stated that his children had such a plaything, and subsequently the little girl acknowledged having placed the lamp into her brother's mouth. The child made an uneventful recovery and I herewith present him in evidence.

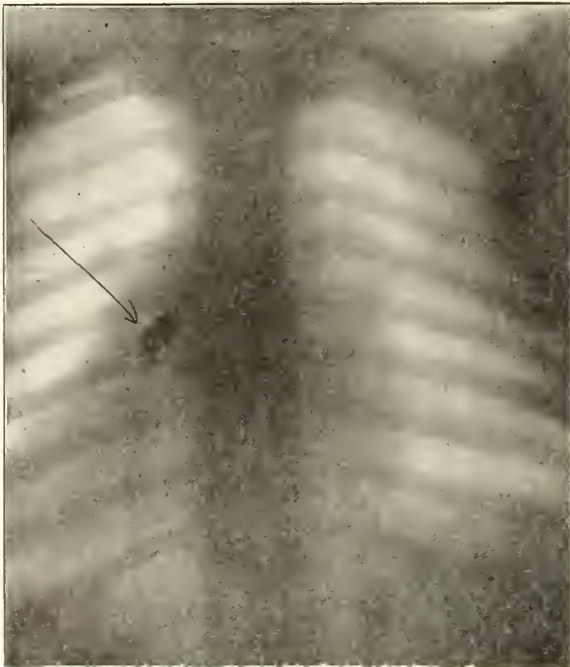


Figure 5.

I had another radiogram (Fig. 6) taken the next morning because of a discussion which came up, to the effect that glass does not show in radiograms. It is interesting to note that this glass bulb did show, and this is explained by the fact that these small bulbs contain a quantity of lead in the glass, and, as can be seen, there is also a platinum wire in the bulb, which, however, does not show distinctly in the radiogram.

I wish to express my kind appreciation to Drs. Jackson, Eisenstaedt and the other gentlemen assisting me in this case.

#### DISCUSSION.

DR. J. HOLINGER: A man came to me with a somewhat similar trouble as the Beck case following the injection of paraffin. He had had a suppuration of the lachrymal tract for which a physician injected paraffin with the hope of effecting a cure. The paraffin miscarried and went into the lower eyelid, causing an ugly looking sausage-shaped tumor. I did not treat the patient, but advised to try heat and massage.



DR. G. P. HEAD: I have cut into such paraffin tumors and had no trouble in squeezing out the mass. No scar was produced. As to malignant degeneration in these cases, I have watched the literature rather closely and have not seen any such cases reported.

DR. JOS. C. BECK (closing the discussion): The matter of malignancy is the particular point I wished to bring out in connection with paraffinoma. Kirchner has written more on that subject than any one else, and he has seen this spindle celled formation around the paraffin. Every foreign body becomes encapsulated, but if it is paraffin, the connective tissue always traverses the masses of it, giving us the appearance of a lipoma. There has been no postmortem report, but

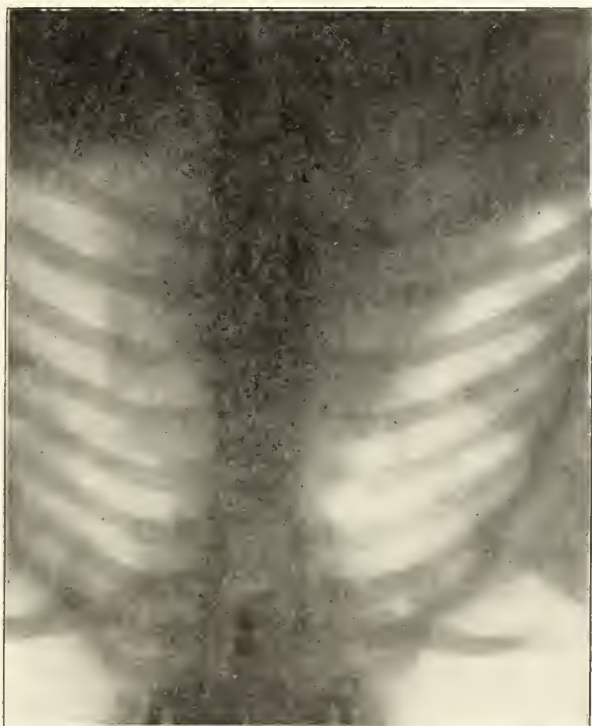


Figure 6.

cases of metastasis have been reported by Kirchner. I know of only one reported death following the use of paraffin, that of Pfannenstiel, who injected paraffin in a case of incontinence of the rectal sphincter.

In order to make glass stronger, lead is incorporated with it, and that is why glass throws a shadow under the Roentgen ray. Glass that does not contain lead will not throw a shadow.

#### CASE OF EXTENSIVE ABSCESS INVOLVING THE FAUCIAL TONSIL AND MASTOID; NASAL TUMOR (TUBERCULOMA) FOR DIAGNOSIS.

J. HOLINGER.

##### DISCUSSION.

DR. JOS. C. BECK: Every once in a while a case of tuberculosis of the adenoids is reported, and no doubt such reports would be more frequent if we would examine every adenoid that is removed. But I think that Dr. Holinger's case was one of an inflammatory mass, a small cell infiltration and not a

malignant tumor or tuberculoma. The duration of the case would preclude sarcoma.

DR. J. HOLINGER (closing the discussion): I saw several of those so-called tubercles in the tissues I examined and thought I was convinced as to the nature of the trouble. The great number of eosinophile cells points to the serious nature of the infection and to its long standing.

As to Dr. Andrews' question about the lead filled hammer, I think that the absence of resiliency in the lead hammer might account for the chisel's breaking. It certainly was very annoying to have to pick out the pieces of steel every time a chisel broke.

The diagnosis of Bezold's mastoiditis was excluded because there were no cells at all. The result of the syringing suggested a possible fracture of the external meatus, but may as well have been due to a dehiscence of the bone in the floor of the meatus.

#### CASE OF CHOLESTEATOMA CAUSING EROSION INTO THE HORIZONTAL SEMICIRCULAR CANAL.

GEORGE E. SHAMBAUGH, M.D.

CHICAGO.

Dr. Shambaugh reported a case of cholesteatoma causing an erosion into the horizontal semicircular canal, and discussed briefly the methods for examining the vestibular apparatus. The case was that of a man fifty-nine years old, who eleven years previous had a purulent discharge from the right ear, which lasted for several weeks. For several years past he has been annoyed with an accumulation in the canal of the right ear, which he supposed was caused by wax. In attempting to remove this with a hairpin he had set up a marked dizziness and nausea. The mass proved to be a cholesteatoma protruding into the meatus from an opening in the upper posterior wall, which led directly into the antrum. The membrana tympani showed maceration and thickening, but did not appear to be retracted or perforated. There was a quick response upon syringing the ear with water only slightly colder or warmer than the body temperature. This response was in the character of a nystagmus and pronounced vertigo. On compressing or rarefying the air in the external meatus by means of the Siegel speculum, even the slightest change in pressure resulted in nystagmus and vertigo. The functional examination showed considerable deafness, more marked for the lower tones, with only a slight defect for the highest notes of the Galton whistle. The Weber was distinctly lateralized to the affected ear, and the Rinné was negative.

From these symptoms the diagnosis of an erosion into the horizontal semicircular canal was made, the erosion having made an opening only through the bony capsule, but not through the endosteum. The slight amount of pressure necessary to produce the nystagmus and vertigo in this case shows how very delicate and sensitive is the adjustment of the terminal apparatus in the ampullæ.

Dr. Shambaugh discussed three methods of testing the excitability of the vestibular apparatus. All of the methods are dependent upon producing a motion in the endolymph of the semicircular canals. In the first method, that of the rotating chair, if the semicircular canals are normal and the individual is rotated toward the right, for example, there will be produced a nystagmus toward the right. If the rotation is kept up long enough, all sense of turning, as well as the nystagmus, will disappear. If the rotation is suddenly stopped, a sense of vertigo is produced, and there will be a return of the nystagmus, but directed toward the left. These phenomena can readily be accounted for by the production of a motion in the endolymph of the horizontal semicircular canals. The reason why the sense of turning and the nystagmus disappear after the rotation is discontinued for some time is explained by the fact that the fluid in the semicircular canals has taken on the motion of the walls of the canal, and

therefore, does not impinge upon the cupula in the crista ampullaris. The production of vertigo, and the nystagmus directed towards the opposite side upon suddenly stopping the turning, is explained by the continuation of the flow in the endolymph of the canals for some time after the turning has been stopped.

The second method of producing a flow in the endolymph of the semicircular canals was the one used in this case in demonstrating the erosion into the horizontal canal. It consists in the production of either pressure or suction of the air in the external meatus. If an opening exists through the bony capsule of the canal, the endolymph will be caused to flow in this or that direction, depending upon whether suction or pressure is used.

The third method of testing the semicircular canals is that elaborated by Barany, and consists of syringing the ear with hot or cold water. If the vestibular apparatus is intact symptoms of vertigo and nystagmus can be produced by the use of either hot or cold water. In a case where the semicircular canals are not affected the reactions obtained are as follows: Syringing with cold water produces a nystagmus which is more pronounced when the eyes are directed towards the opposite side. Syringing with warm water will produce a nystagmus more pronounced when the eyes are directed towards the same side. The vestibular apparatus may be placed in a state of hyperexcitability as the result of irritation, such as may occur from circumscribed suppuration of the labyrinth. Under these circumstances the normal reactions upon syringing with hot and cold water can be obtained. In addition, however, there will frequently be present a spontaneous nystagmus directed toward the affected side.

When the vestibular apparatus is destroyed no reactions can be obtained by any of the methods for stimulating this part of the internal ear. If the destruction of the nerve endings in the internal ear has been a sudden one, there will be present for a short time a nystagmus toward the normal ear, which has its origin in this ear and not in the affected one. Disease of the cerebellum, such as tumor or cerebellar abscess, may produce the same symptoms as occur from irritation of the nerve endings in the vestibule, that is, a spontaneous nystagmus directed toward the affected side. One can readily see how this study of nystagmus, both spontaneous and induced, is of great value in the diagnosis not only of diseases of the labyrinth, but of such conditions as cerebellar abscess and cerebellar tumor.

#### DISCUSSION.

DR. J. HOLINGER: Dr. Shambaugh has gone over the ground very thoroughly, and these results of experimental pathology for the scientific physiology of the labyrinth are most valuable, but another question is to what extent can we apply these tests in our office for diagnostic purposes. Not everybody has a revolving platform, and it is not necessary either. The use of hot and cold water is also very practicable for demonstration in a hospital where you have plenty of assistants, but in an office, where the operator is alone, the procedure is a very dangerous one because the patient may faint and fall and hurt himself. I use cool and warm water and get the same reactions of nystagmus. Letting the patient hop back and forth with the eyes closed is a good and safe test of the stasis. A perforation of a suppuration into the static labyrinth, consisting of vestibulum and semicircular canals, as the danger of such perforation can perfectly well be diagnosed in the manner just stated. The use of excessive temperatures for the tests is unnecessary, brutal and dangerous. In testing the capacity of a bladder, who would fill it till it nearly bursts? Many patients told me that the dizziness from too warm solution is worse than any pain.

DR. JOS. C. BECK: Dr. Holinger's remarks might be taken as underestimating the value of the methods described by Dr. Shambaugh. I think that this is one of the best things we have learned—the diagnosis of labyrinthine disease by means of hot and cold water, all the credit being due to Barany. Look out that the patient does not fall. I have used the method in my office with satisfaction. Of course, one would not inject water into an ear that had been suppurating and became dry except for diagnostic purposes.

DR. F. ALLPORT: This is a most valuable method for diagnosing labyrinthine disease. Last year I spent a few weeks in Vienna. Barany's tests were made on every suspicious case that was admitted into the Politzer ear clinic. They all use them and depend on them, and we can not afford to ignore the judgment of men of such experience. It is the simplest, easiest and best method for diagnosing labyrinthine disease at our disposal. Dr. Holinger's objections are inconsequential and do not militate against the value of the tests.

#### EFFINGHAM COUNTY.

Following are the names and addresses of the officers elected Dec. 8, 1908, for the year 1909: C. F. Burkhardt, Effingham, president; P. I. Cromwell, Effingham, vice-president; W. H. St. Clair, Effingham, second vice-president; F. W. Goodell, Effingham, secretary; Henry Taphorn, Effingham, treasurer. Board of censors: Geo. Hommesser, Shumway; J. N. Matthews, Mason; J. H. Walker, Effingham; T. J. Dunn, Elliottstown; H. A. Long, Effingham. Delegate, Geo. Hommesser, Shumway; alternate, J. H. Walker, Effingham; member of the medical defense committee, J. B. Walker, Effingham.

#### LA SALLE COUNTY.

The La Salle County Medical Society held their semi-annual meeting at La Salle, Ill., on Oct. 27, 1908. There were forty members present, and a very profitable and interesting all day meeting was held. The matters which created the most interest from the standpoint of business were the revision of the County Fee Bill and the amendment of the by-laws which provided for branch societies of the county society in order that the members might do more effectual post-graduate work. Three branches were formed, being at the three cities in the county which were most accessible to all the members, and a program was adopted which will be followed through the winter season. The Dr. MacCormack resolution was adopted and a committee was appointed to confer with the representative of our district to secure his influence for the National Department of Health.

The members of the county society were the guests of the La Salle-Peru branch for dinner, and after a sumptuous repast the society met for the scientific program. Four very interesting and helpful papers were given, two of which will be found in this issue. Program:

1. "Surgery of the Prostate Gland".....Dr. S. B. Plummer, Chicago  
Discussion opened by Dr. Walter Curry, Streator.
2. "Operations on the Neurotic".....Dr. J. F. Percy, Galesburg  
Discussion opened by Dr. P. M. Burke, La Salle.
3. "Renal Calculi" (report of cases).....Dr. Roy Sexton, Streator  
Discussion opened by Dr. E. P. Cook, Mendota.
4. "Pulmonary Tuberculosis".....A. H. Hattan, Peru, Ill.

Dr. J. F. Percy gave a very interesting paper, but as we hope to hear further from this paper we have not presented an abstract for THE JOURNAL. After Dr. Plummer's paper was read Dr. Walter Curry opened the discussion. Dr. Curry has recently returned from Europe, where he was much interested in the clinics at which the prostate operation is being performed, and we learned at that meeting that the American surgeons were pioneers in the suprapubic operation. The meeting adjourned at 5:30 p. m. and all agreed that the day was spent to good advantage. The spring meeting will be held at Ottawa.



## RENAL CALCULI—REPORT OF CASES.

ROY SEXTON, M.D., STREATOR, ILL.

In reporting these cases I do not propose to enter into an exhaustive study of renal calculi, but having obtained two rather unusual specimens, thought it would be interesting to present them at this meeting.

CASE 1.—Mrs. V., of Kangley, Ill., Italian, age 36, referred to me by Dr. Powers. She was the mother of six children. The last two had died soon after birth. She had been strong and hearty until within three or four years of the time I first saw her. During the last three or four years she had two children, the last one about two weeks previous to the time I saw her. She had been treated a great deal for backache and severe paroxysmal pains in the region of the gall-bladder. Three or four months before I saw her she had gone to Mercy Hospital, Chicago, for an operation, but the doctors sent her home, probably on account of her being pregnant. When I first saw her, about two weeks after her confinement, there was a large mass in the right upper quadrant of the abdomen. This was palpable below the lower margin of the liver in the region of the kidney. She looked very toxic and was running a temperature from 99 to 102. The urine showed large quantities of pus which, together with other symptoms, confirmed the diagnosis of a probable kidney abscess accompanied by a stone. The patient was brought to Streator, where, March 15, 1906, I opened a very large abscess of the kidney and removed the stone which I will now pass around. It was four inches long and weighed two ounces. Several of the larger prongs that extended into the calices of the kidney were broken off in removing it, but these were easily taken out. The stone was in two portions in the kidney; one part extending into the hilum of the ureter, and the other extending into the calices of the kidney. It shows a remarkably smooth articular surface between the two portions. The condition of the patient, having two weeks previously been confined, and the parenchyma of the kidney having been pressed aside rather than destroyed, it seemed advisable to simply drain the kidney. The patient had a very stormy recovery running a high temperature for about three weeks, sometimes as high as 105. She finally left the hospital six weeks after the operation. She was well enough to be about the house most of the time. The incision closed, but she continued to pass a large amount of pus and looked very septic. About a year from the time of the nephrolithotomy she returned to the hospital and I removed the kidney. It contained an abscess cavity the size of a walnut. She left the hospital in about four weeks and improved so that about two months after the operation she walked from Kangley to Streator, four miles. However, she never fully recovered, and about three months after the last operation died of uremic coma.

CASE 2.—Mrs. A. P., American, aged 57. She has a deformity, shortening of the right leg, which she claims was due to acute inflammatory rheumatism when a child seven years old, but judging from the nature of the deformity it was probably tubercular. She has had one child and been in fairly good health until about two years ago, when she began having pains in the right side extending down into the abdomen and up into the right shoulder. She could feel a mass in the right side and had been treated for this condition and advised to have an operation. I was first called to see her July 22, 1908, on account of persistent emesis. This responded readily to medication, but examination revealed a large tender kidney on the right side somewhat prolapsed. This was movable but showed some inflammatory rigidity. Patient had a temperature of 101, complained of a bitter taste in the mouth and had a profoundly toxic appearance. Examination of the urine showed a trace of albumen and some pus. After a week of medical treatment the only improvement was in the vomiting, so she accepted an operation as a last resort. This was done July 29, 1908. The kidney was simply exposed and no attempt made on account of its size to bring it out of the incision. After exposure the upper pole was incised and found to

contain about one ounce of pus. Further exploration revealed a mass in the pelvis of the kidney which proved to be a stone weighing six ounces. This was easily removed and drainage instituted. The patient did well and left the hospital inside of three weeks. The incision closed at the end of the fourth week. She continued to improve slowly until about October 1. Then she had more pain in her side and more tenderness, until finally the sinus opened again about two weeks ago. She has never had a good appetite and has lost weight greatly during the last few weeks, so that the outlook for her recovery is bad.

CASE 3.—Mrs. H. K., aged 20, mother of three children. Had always been well and strong except diseases of childhood until about two years and a half before she was operated on. Before she became pregnant the second time she developed a large inflammatory mass in the left side with a continuous discharge of pus in the urine. Under rest and medical treatment this would improve for a time, then she would suffer another acute exacerbation of the trouble. She suffered greatly while carrying her second child, which was born during the seventh month of gestation. It lived only a few days. After the confinement she improved rapidly while taking urotropin but continued to pass some pus. She became pregnant again about two months after the premature birth. This third pregnancy did not irritate her kidney so much and she carried it to full term, being delivered of a healthy but small child Dec. 11, 1907. While nursing this child the kidney troubled a great deal. The last week of June, 1908, there was a notable increase in the size of the kidney. She had a temperature of 102 several days, so that she finally consented to an operation. July 4 I did a nephrotomy, finding about an ounce of pus. I examined the cavity for a calculus but could not discover any. Patient improved rapidly and left the hospital in three weeks. The drainage tube was taken out at that time. While changing the dressing one morning she discovered on the gauze a small calculus about one-half the size of a pea. She sent this to me for inspection but after examining it I was unfortunate enough to lose it, so can not present it for your inspection. The sinus closed six weeks after the operation and she is now in excellent health.

In these cases some of the later devices for assisting in a diagnosis were not available, so that all we could do was diagnose an infected kidney probably containing a stone. In the June number of *Surgery, Gynecology and Obstetrics*, Drs. Bevin, Smith, Vaughn and others have admirably treated of the diagnosis and treatment of renal calculi, and especially of the x-ray, catheterization of the ureters and cryosecopy. In our cases the diagnosis was made on the history of repeated localized pains, temperature, swelling, tenderness, rigidity and pus in the urine.

In treating the cases containing the large calculi the most important question, of course, was whether the kidney should be removed or simply drained. We refrained from a nephrectomy, first on account of the added danger from shock, as both patients were very much prostrated; one patient being advanced in years and the other still convalescing from her recent confinement; second, on account of infection. In removing the kidney one would necessarily open up fresh tissue to infection. If this became infected it would not offer the resistance to the absorption of toxins that the kidney itself would; third, the systems of the patients, being profoundly toxic, needed all the elimination it was possible to obtain. The portion of the kidney substance surrounding the stone and abscess cavity seemed sufficiently healthy to secrete considerable urine. The elimination by this secretion would probably aid the patients more than an infected kidney remaining would harm them.

In the treatment of the case containing the small calculus I felt that drainage would be sufficient, as, in this case also, the tissues were not greatly degenerated. The wisdom of this procedure was demonstrated by the rapid and complete recovery of the patient.

As these cases are comparatively rare in the average medical experience, great care should be taken to weigh all conditions and the nature of the operation must

necessarily be controlled by the state of the patient in other respects as well as by the kidney conditions themselves. In cases where the kidney tissues are destroyed or injured to such an extent that they are no longer of evident value to the patient, a nephrectomy is certainly indicated at the primary operation when other conditions warrant such a procedure.

### SURGICAL TREATMENT OF PROSTATIC HYPERTROPHY.

S. C. PLUMMER, M.D., CHICAGO.

When, in 1886, I assisted Dr. Wm. T. Beldfield in the removal, through a suprapubic incision, of an enlarged middle lobe of the prostate, I did not realize that I was participating in the introduction of a new epoch in prostatic surgery. Such, however, proved to be the case, as this operation is now referred to as the first prostatectomy by direct exposure of the enlarged gland. This case was briefly reported in the *Journal of the American Medical Association*, vol. viii, page 303, March 12, 1887. Previous to this time the only operation involving removal of any portion of the prostate was Mercier's, in which an instrument similar to a lithotrite was inserted through the urethra and portions of the projecting middle lobe bitten off.

The development since that time of the technic of removing prostatic enlargements by operative measures has made it possible to relieve suffering in many cases not benefited by other means of treatment. Operations for the purpose of drainage had previously been done, and with benefit, but the operation of prostatectomy, that is, the removal of part or all of the prostate gland dates, for all practical purposes, from Beldfield's operation.

Before entering upon the discussion of the various operations I wish to say that by no means all cases of prostatic enlargement require prostatectomy. In view of the fact that nearly all men over fifty years of age have some prostatic hypertrophy, I would say, rather, that only a small minority of these cases require this operation.

In many cases practically no symptoms are caused, and, consequently, no treatment of any kind is required. The causation of symptoms depends not so much on the degree of the hypertrophy as it does upon the interference with the urinary passage; thus a large symmetrical hypertrophy may cause but little trouble, while a small localized hypertrophy distorting the prostatic urethra may cause marked disturbances. In other cases, where symptoms are present, non-operative measures often suffice. The patient should avoid alcohol, over-eating, over-exertion and catching cold. He should drink copiously of water in order to keep the urine well diluted and hence bland and unirritating.

If cystitis is present, a large part of the obstructive symptoms is due to inflammatory swelling superimposed on the hypertrophy. Antiseptics of the urotropin class will often reduce the infection and with it the accompanying inflammatory swelling to such an extent as to practically remove all discomfort. Daily catheterization with proper antiseptic precautions will often afford great relief when there is some retention. Irrigation of the bladder may be added.

By use of the above means many cases, even with rather pronounced symptoms, may be kept so comfortable that an operation is not necessary, but in many cases the patient's condition is not relieved and his life is made a burden by constant pain, frequent desire to urinate, and consequent loss of sleep. In these patients the condition is so pitiable that we are justified in taking almost any risk if by so doing there is a prospect of relieving them.

These patients are bad operative risks for several reasons. In the first place, they are past middle life, past the period of greatest bodily resistance. Secondly, their general condition is reduced by pain, frequent urination, lack of sleep and sepsis incidental to the condition. Thirdly, the urine is almost invariably septic, so that an aseptic wound is not to be obtained. Lastly, the kidneys are frequently compromised as the result of urinary obstruction and sepsis. Conse-

quently these patients withstand poorly the shock of operation, while the anesthetic affects the kidneys unfavorably, so that suppression of urine may follow.

The operations for the relief of the conditions caused by prostatic hypertrophy are the following:

1. Operations for drainage.
2. Bottini's operation.
3. Suprapubic prostatectomy.
4. Perineal prostatectomy.
5. Combined suprapubic and perineal prostatectomy.
6. Castration and vasectomy.
7. Operation in two stages.

1. *Operations for Drainage.*—Before prostatectomy became the usual operation for prostatic hypertrophy, drainage by cystotomy, either by the suprapubic or perineal route, was recommended in cases which had resisted other means of treatment. At the present time this is rarely used as a final operation, although advocated in patients who are in serious condition as a preliminary measure preceding prostatectomy.

2. *Bottini's Operation.*—This consists of cauterization with an electric cautery which is introduced through the urethra. It requires an expensive and somewhat complicated apparatus. It is an operation in the dark, and does not provide for drainage, which I regard as most important in these cases. It can not be denied that in certain cases, especially where the chief cause of trouble is the projection into the prostatic urethra of an enlarged "middle" lobe, good results are obtained. Personally, the fact of having seen two postmortem examinations in patients that had been operated upon by this method, in which extensive sloughing had taken place and the patients succumbed to sepsis, prejudiced me against the procedure.

3. *Suprapubic Prostatectomy.*—This consists in the removal of a part or the whole of the prostate by means of a suprapubic cystotomy. The bladder having been opened from above, the mucous membrane of the bladder covering the enlarged prostate is incised, and while an assistant makes upward pressure with a finger in the rectum, the gland, or a portion of it, is enucleated with the finger or some blunt instrument. The bladder is then drained through the suprapubic wound. This drainage is sufficient if the facial spaces beneath the gland have not been opened, that is, if the gland has been enucleated without opening that portion of its capsule which separates it from the perineal structures.

Ransohoff<sup>1</sup> has recently devised a means for the use of perineal drainage in these cases, whereby the operation is not materially prolonged. His method consists in passing a large curved trocar and cannula "through the most dependent of the emptied prostatic pouch against a finger of the left hand placed a little over half an inch in front of the anus." The trocar is then withdrawn and a drainage tube passed through the cannula, which is then withdrawn. This appears to me to be a distinct improvement in the technic.

4. *Perineal Prostatectomy.*—In this operation the prostate is approached from below. Several incisions have been recommended, but those most frequently employed are the median incision just in front of the anus and the curved incision with the convexity toward the scrotum. After getting through the skin and fascia the greater part of the necessary dissection can be done bluntly with the finger. The rectum often pouches forward toward the urethra further than one would expect. This must be liberated, and in the further dissection one must work toward the prostate and away from the rectum in order to avoid wounding the latter. In this part of the operation the prostate must be held down against the finger which is separating the gland from the surrounding tissues. There are several means of doing this. Pressure with the hand over the pubes will be of some assistance. Ferguson has devised a prostatic depressor which is introduced through the urethra. If it is impossible in a given case to

1. Ransohoff; A New and Rapid Method of Perineal Drainage in Suprapubic Prostatectomy. Jour. Amer. Med. Assn., Vol. II, No. 11, p. 887, Sept. 12, 1908.



pass this instrument, the membranous urethra may be incised and the instrument passed into the bladder through this incision. Young has devised a prostatic tractor which is introduced through a similar incision into the membranous urethra. Before introduction it has the shape of a single-bladed retractor; after introduction it is made to spread so as to present two blades extending in opposite directions.

When the capsule of the gland has been sufficiently exposed an incision is made through it over the projecting lateral lobe on one side. This incision must be large enough to admit the tip of the finger, and sometimes must be more than a quarter of an inch deep. The finger, introduced through the opening thus made, can, as a rule, enucleate sufficient of the gland from the corresponding side of the prostate. A similar incision through the capsule over the other lateral lobe permits further enucleation on that side. Sometimes a third portion, corresponding to the so-called middle lobe, can be enucleated through one of the lateral incisions. This enucleation is aided by the use of one of the retractors mentioned above.

In many cases the enlargement constitutes a tumor within the gland similar to a uterine myoma. These are the easiest to enucleate. In other cases a portion of the gland itself is enucleated. In rare cases enucleation is impossible and part of the gland must be removed piecemeal with scissors or cutting forceps. It is seldom necessary to remove the entire gland. After sufficient tissue has been removed, a drainage tube is inserted into the bladder through the wound, and secured by a suture through the skin. The wound is partially closed by sutures and a gauze drain put in on each side of the tube.

5. *Combined Perineal and Suprapubic Prostatectomy*.—Some operators recommend the combined operation. It certainly gives one most excellent control while doing the enucleation, but with the aids we now have at our disposal I do not regard it as often called for.

6. *Castration and Vasectomy*.—These operations are supposed to cause shrinkage of the prostate gland, just as removal of the ovaries in the female will cause shrinkage of a myomatous uterus. These procedures, warmly advocated by Prof. J. William White, are now rarely resorted to.

7. *Operation in Two Stages*.—Chetwood<sup>2</sup> and others have advocated operating in two stages in cases which are in bad condition. The first operation consists in providing drainage, usually by the perineal route. The second operation consists of prostatectomy and is performed as soon as the drainage, by reducing the sepsis, has sufficiently improved the patient's condition. The interval between the two procedures is usually between one and two weeks.

*Results*.—When the patient survives the operation, improvement in every way may be expected, although the first few days are very uncomfortable, owing to the escaping urine. The wound soon closes down upon the drainage tube, and, by connecting this with a longer tube, the urine may be collected in a bottle. This tube may be clamped at times and the patient allowed to sit up and even to walk about. It is well to get them out of the recumbent posture early.

After from ten to fifteen days the drainage tube is removed, and sounds passed through the urethra. This must be repeated every two or three days. At first all of the urine will pass through the fistula, but after a few days some will pass through the urethra. From this time on more and more comes through the natural channel, and in favorable cases the fistula closes in three or four weeks. The patient can then void his urine without pain and can retain it for from two to eight hours. The septic condition is relieved and the general health improved. These favorable results are the rule.

2. *Annals of Surgery*, 1906, Vol. xliv, p. 563.

Unfortunately, some cases do not terminate so favorably. Occasionally the fistula refuses to close. If the rectum has been wounded there may follow a persistent rectovesical fistula. Some patients never get control of the sphincter vesicae, and incontinence results. Epididymitis, sometimes terminating in abscess, is an occasional complication.

*Choice of Method.*—At the present time the choice of method practically lies between suprapubic and perineal prostatectomy. Each procedure has its advocates. No doubt each is preferable in certain cases. For instance, if it can be determined by bimanual examination or by the cystoscope that the enlargement is confined to the middle lobe, the suprapubic route would be the more advantageous. I have preferred the perineal route because it gave the best drainage, but if the suprapubic operation is supplemented by perineal drainage, this advantage of the perineal route is removed, whereas the suprapubic operation can be carried out with less danger of injury to the rectum.

Schachner,<sup>3</sup> in a recent article, after reviewing the statistics, says: "The statistics are harmonious throughout, namely, that the perineal operation is almost twice as safe as the suprapubic."

I believe this is not a virtue of the operative procedure *per se*, but is owing to the better drainage afforded.

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#### MACOUPIN COUNTY.

The quarterly meeting of the Macoupin County Medical Society was held in the Masonic Reading Room at Carlinville, Oct. 29, with President J. P. Denby presiding. The following members were present: Drs. Davis, Fisher, J. Pitt and J. Palmer Matthews, and L. H. Corr, of Carlinville; Drs. King, English, Gross and Hobson, of Gillespie; Drs. Motley and Lockwood, of Virden; Dr. Trout, of Atwater; Dr. Pattison, Benld.

The minutes of the last meeting were read and approved. The treasurer's report, showing a balance of \$1.60 in the treasury, with no outstanding bills, was also accepted. Communications from Dr. McCormack concerning a National Department of Public Health and from the American Medical Association concerning advertising doctors and medical companies were read. The meeting then adjourned for dinner at the Central Hotel.

At the afternoon session Dr. E. K. Lockwood read an excellent paper on "Fracture of the Pelvis with Rupture of the Bladder (with report of four cases)." The paper was received as a contribution to the society and thanks extended to Dr. Lockwood. The committee appointed to submit a county fee bill reported and the committee was continued till next meeting, when the sample fee bill will receive detailed consideration.

The society was fortunate in the presence of Dr. J. W. Pettit, president of the Illinois State Medical Society, who had just returned from the International Tuberculosis Congress held at Washington. He gave a glowing report of the work of the Congress and told of the unanimity which characterized the proceedings, except in the matter of the resolution concerning bovine infection. He discussed also the early diagnosis of tuberculosis and emphasized its importance because it is safe to say that 90 per cent. of incipient cases can be cured, while not more than 50 per cent. of advanced cases, nor more than 1 or 2 per cent. of far advanced cases can be cured. There have been absolute demonstrations of cures in all countries, which prove that, though change of climate may be desirable it is not essential. By advanced cases he must mean those whose sputum contain bacilli.

By the ordinary methods of physical examination, auscultation, percussion, etc., it is impossible to arrive at more than a well-grounded suspicion of tuberculosis in its incipency. There have been developed, however, the tuberculin

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3. Schachner: Comparative Value of Various Measures for Relief of Prostatic Enlargement, *Annals of Surgery*, August, 1908, vol. xlviii, p. 258.

tests, the technique of which were explained. In the cutaneous method, which is the simplest of the tuberculin tests, there is a considerable percentage of error. The ophthalmic method, though with less range of error, is not without danger. The subcutaneous, which is the most nearly correct, is, however, more expensive and difficult.

It was a real pleasure to meet and talk with Dr. Pettit, and his visit undoubtedly gave an impetus to our county organization. A vote of thanks was extended to him.

#### FRACTURE OF THE PELVIS WITH RUPTURE OF THE BLADDER (REPORT OF FOUR CASES).

E. K. LOCKWOOD, M.D., VIRDEN, ILL.

I have selected this subject of "Fracture of Pelvis and Rupture of Bladder" for the reason that this injury is very common among the coal miners; especially the drivers, and as a large part of our population is coal miners I think this injury is common, having seen four cases in the last four years in a town that has about fifteen hundred to two thousand miners. This injury occurs most generally by being caught between the coal cars and squeezed or squeezed and rolled.

##### PATHOLOGY.

One of two things will occur, depending on age; those under twenty usually have separation of the symphysis pubis with over-rising of bones, also separation sacro-iliac articulation and rupture of bladder, while those over twenty have a green-stick fracture of ascending ramus ischium or descending ramus with rupture of bladder. This rupture of bladder is in the great majority of cases extra peritoneal and the rent is in the region of the trigone.

##### SYMPTOMS AND SIGNS.

The symptoms of this injury are classical and I will give them in the order that they generally will be observed, and their importance will come in that order.

Shock is always present, and it varies in degree owing to the extent of injury. In case number one it was profound. While in case number four it was slight. Constant desire to urinate with inability to pass even a few drops is always present. On passing catheter you succeed in drawing off a few ounces of bloody urine or it may be nearly pure blood. Examination per rectum shows that there is a difference in contour on the two sides of the pelvis, the side of the fracture feeling fuller than the corresponding side. I think with these symptoms and signs one can feel positive of fracture of the pelvis with injury to bladder, but if he waits 12 to 24 hours there will be dulness in flanks due to extravasation of urine, which may extend as high as umbilicus, also ecchymosis of the scrotum and perineum.

Mortality due to such injuries will vary owing to extent of injury and treatment. Von Bergman gives 75 per cent. mortality in cases that were not operated on, while cases operated on had a mortality of 50 per cent. In our four cases, those that were operated on lived, while those cases we did not operate on died.

##### TREATMENT.

Is operative; suprapubic incision down to bladder. Be careful not to open peritoneal cavity, and if possible repair rent in bladder. If patient's condition will permit, open bladder, place in drainage, provided you can not get at rent (in case number three, patient's condition was so desperate that we placed drainage in region of bladder rents, packed off Retzin's space). Catheter is placed in for a few days. The question will come up, shall we wait until shock is over? I think not; shock continues as long as urine is extravasated into tissues, probably due to stretching of nerves, and we noticed within a half hour after operating patient began to recover from shock. Asepsis is very important.

CASE 1.—J. V., male, age about 28, caught between cars 7 a. m., seen at 8 a. m. Collapsed, pulse 150; bruise on back. Passed catheter, drew one pint of bloody urine, injected boric acid solution; all returned. Frequent desire to urinate. A pear-shaped tumor in hypogastric region the size of a child's head, abdominal muscles rigid. Pain below umbilicus of lancinating character, patient died at 8 p. m.; postmortem examination, rupture of bladder the size of the palm of the hand with fracture of the ascending ramus ischium, considerable urine in Retzius' space.

CASE 2.—Mr. J., driver, age 17, squeezed between cars, considerable shock, constant desire to urinate but could not; passed catheter and drew off bloody urine; in two or three days urine was clear; complained of pain in region of bladder; condition grew worse. Patient died on the fourth day.

Postmortem:—Separation of pubic articulation with over-riding; some extravasation of urine, as high as umbilicus; rupture of the bladder in region of trigone. Dr. Motley caught one side of ramus of pubis and I held the opposite side, and we could not reduce fracture or dislocation; then we tried to pry between articular end of pubic bone with no better results.

CASE 3.—E. K., driver, male, 17, injured about 2 p. m.; kicked by a mule, does not know what happened. Saw him at 5 p. m.; complained of pain over bladder and in back; constant desire to urinate, but not able to pass any urine; said that that was all that bothered him; shock extreme. Abdominal muscles tense and boardy, dullness over region of bladder shading into resonance above, depression over pubic bone on left side. Examination per rectum, a full feeling in left side as compared to right. Passed catheter and drew off two ounces of bloody urine.

Operated 23 hours later; condition at time was alarming, shock still present; pulse 130 and weak. Incision over region of bladder, about one quart of urine escaped; pubic articulation had separated and was riding under bone of right side; assistant caught pubic ramus on one side and operator caught opposite, but could not reduce dislocation; could not sew rent on account of location, so placed in drainage tube and packed Retzius' space, placed in retention catheter; patient recovered.

Present condition, July 28, left foot turns out and has a limp but no trouble with bladder in any way; condition is good.

CASE 4.—R., Italian, male, aged 34, squeezed between cars; shock and constant desire to urinate, but could not pass any. Examination per rectum could feel a distinct fulness on left side of pelvic bone in region of ramus ischium. We took patient to hospital, operated 7 p. m.; suprapubic cystotomy (patient at time was suffering from shock); placed in drainage, could feel fracture of ramus ischium. Present condition of the patient, left foot turns out, bladder wound healed.

I wish to express my thanks to Dr. Morgan and to Dr. Motley for permission to report cases number two and four.

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#### MASSAC COUNTY.

Dr. J. W. Pettit arrived here on December 13 and remained two days. On Sunday afternoon he delivered a lecture on tuberculosis at the M. E. Church to a crowded house. He spoke to a very attentive audience of representative citizens and we can begin to see the benefit of his visit. If his trip over the state could be followed up by a regular lecture course and get the people thoroughly aroused, public sentiment would soon make things right.

On Monday Dr. Pettit met with our county medical society, and lectured before noon on medical organization, and in the afternoon on the early diagnosis of tuberculosis. We had a splendid meeting and the society tendered a vote of thanks to Dr. Pettit for his visit. On Sunday after the lecture at the church



the local physicians, with the doctor, paid a visit to "Old Fort Massac," one of the oldest historical points in Illinois.

Our county society is one of the oldest in the state, and although we are few in number and do not hold meetings as often as we should, yet the organization is maintained and we are proud of our old records, and are going to continue the fight till we win.

A. C. RAGSDALE, Secretary.

### MONROE COUNTY.

The Monroe County Medical Society held a special meeting at the Court House, in Waterloo, Ill., December 8, with a good attendance of members. The society invited the public to hear an address by Dr. J. W. Pettit on "The Tuberculosis Problem," and an appreciative audience greeted the doctor. After the lecture Dr. Pettit addressed the society, his subjects being "Medical Organization and Ways and Means of Securing a Full Attendance at County Society Meetings." Monroe County is now thoroughly organized, there being but one physician in the county who is not a member of the local society.

The following notice of Dr. Pettit's address appeared in the local paper:

"Under the auspices of the Monroe County Medical Society, Dr. J. W. Pettit, of Ottawa, Ill., president of the Illinois State Medical Society, who is making a tour of the State during his incumbency visiting the County Medical Societies, delivered an interesting and instructive talk on tuberculosis for the benefit of the general public at the Court House Tuesday afternoon last.

"To illustrate the magnitude of the scourge, Dr. Pettit gave the following statistics and comparisons: there are 160,000 deaths from tuberculosis yearly in the United States, 9,000 in the State of Illinois alone; more than all other contagious diseases combined; more than twice as many perish in the United States in four years than were lost on both sides during the civil war, and more deaths occur in one year than have perished from yellow fever in 115 years.

"This terrible destruction of life, which is easily preventable and within reasonable limits, curable, is caused by a disease that is contagious and not hereditary. The chief source of the disease is in the sputum of persons afflicted which is disseminated by careless spitting, the contagion being the same as in other contagious diseases, such as smallpox, diphtheria, etc., though to a less degree.

"One of the greatest causes in contracting the disease is for one to live in a house, or occupy bed rooms, which have been used by consumptives and have not been properly disinfected.

"In the treatment of tuberculosis, climate does not cut the figure which it was formerly supposed to have, for it has been established beyond all question of doubt that cases can be as thoroughly and satisfactorily treated with as large a percentage of recoveries in Illinois as is obtained in Florida or Colorado.

"The treatment resolves itself into one of nutrition only, and the agents employed are fresh air, proper food and properly regulated rest and exercise.

"The success of treatment rests primarily on an early diagnosis, most patients waiting until the disease obtains a firm foothold before consulting a physician, thereby lessening the chances of a cure.

"Among preventive measures, he laid particular stress upon the necessity of stopping spitting in public places, thereby removing the prime causes.

"Dr. Pettit founded the Tent Colony at Ottawa, as a private sanitarium, and its success, which has been well merited, will no doubt prove an incentive to the next Legislature to make an appropriation for the establishment of a state institution for the care of consumptives. Such eleemosynary institutions have been established in Missouri, Minnesota, Pennsylvania and other states; Illinois has always prided herself on her charitable institutions, but in the care of consumptives and epileptics she has been sadly lacking.

"The audience was a very appreciative one and we hope that the County Society will favor the public again with a lecture on this subject, which is of so much importance to all of us."

Secretary L. Adelsberger, M.D., makes the following comment on Dr. Pettit's address: "Dr. Pettit's work will lead to good results, not only with the developing of interest by the public in the fight against tuberculosis, but in stimulating members of county societies to take a more active interest in the organization."

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#### OGLE COUNTY.

The Ogle County Medical Society held its fourth quarterly meeting in the chapel of the Old Sand Stone, Mount Morris, on Oct. 21, 1908, at 1:30 p. m. Dr. Beverage, the president, called the meeting to order. The roll call found the following physicians present: Drs. Akins, Brubaker, Brigham, Bowerman, Brown, Haines, Johnson, Krebs, Kretsinger, McCosh, Powell, Price and Roe. Visitors: Dr. Harsha, of Chicago; Dr. Walter B. Helm, of Rockford; Dr. Replogle, of Leaf River; Dr. E. S. Murphy, of Dixon; Dr. C. A. E. Tesage, of Dixon, and Dr. Colton, of Oregon. New members elected to full membership were: Drs. Royal O. Brown, of Forreston, and Geo. B. McCosh, of Mount Morris.

The subject, "Surgical Diseases of Gall Bladder and Ducts" was opened by Dr. Wm. M. Harsha, of Chicago. The doctor presented an excellent paper and the discussion was entered into by Drs. Helm, of Rockford, and Murphy, of Dixon. The next subject, "Ectopic Gestation," was presented by Dr. Walter N. Helm, of Rockford. This subject, although somewhat rare, was presented in an able manner by the doctor. He advised an early diagnosis, and by all means an early operation should be done to prevent hemorrhage and to save the life of the patient. This subject was very ably discussed by Dr. Murphy.

A vote of thanks was tendered to Drs. Harsha and Helm for their able papers presented to the society. Dr. Haines moved that at the next regular meeting the physicians of the place of meeting prepare a program. Motion carried. The meeting then adjourned to meet at Oregon the third Wednesday in January, 1909.

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#### PEORIA COUNTY.

The Peoria City Medical Society met Oct. 20, 1908. A report of the International Congress of Tuberculosis at Washington was given. Dr. Jeannette Wallace gave a very interesting and complete account of the section on economics and social side, following with a description of the exhibits. Dr. J. H. Bacon explained Dr. Robert Koch's present position in regard to the bovine strain of tubercle bacilli, also a summary of the newer scientific work of the congress.

*November 3, 1908.*—No meeting.

*November 17, 1908.*—Dr. Geo. Parker read a paper on "Vaccine Therapy." He gave the history of the vaccines in recent years. Then a summary of the results obtained by different workers in some of the diseases treated, also his personal experience.

*December 1, 1908.*—The evening was given over to the demonstration of Roentgen ray plates by Drs. C. U. Collins, R. L. Green and S. M. Miller, and a history of the cases presented.

*December 15, 1908.*—Annual election of officers.

## SANGAMON COUNTY.

The ninth annual meeting and banquet of the Sangamon County Medical Society was held Monday, November 9, at the St. Nicholas Hotel, Springfield, and was attended by almost a hundred physicians and was the most successful meeting ever held by the society. The early part of the evening was given over to the election of officers, the following being chosen to serve for the ensuing year: President, Dr. Walter Ryan; vice-president, C. L. Nelson; secretary-treasurer, G. T. Palmer; censors, O. F. Maxon, D. W. Deal and C. L. Patton, all of Springfield.

After the business session the members of the association and their guests were invited to a banquet, following which excellent talks were made by Dr. James B. Herrick, of Chicago, a professor of Rush Medical College, who took as his theme "Methods of Diagnosis;" Judge Charles P. Kane, of Springfield, whose topic was "The Cat in a Strange Garret," and the Rev. Frederick W. Burnham, pastor of the First Christian Church, who used as his subject "Religion and Medicine."

The talk made by Dr. Herrick was an unusually instructive one and was listened to with much interest by all present. The address made by Judge Kane was one of the features of the evening's programme. The subject, "Religion and Medicine," as handled by Dr. Burnham, was a delightful surprise to those present. In his remarks the speaker showed how closely related the pastor and the doctor were in their work.

Those present were as follows:

Springfield—Charles L. Patton, James A. Egan, L. C. Taylor, A. E. Princee, Walter Ryan, F. W. Burnham, Charles P. Kane, G. W. Kreider, George T. Palmer, C. S. Nelson, B. B. Griffith, H. H. Tuttle, A. C. James, W. A. Halbert, D. W. Deal, D. M. Ottis, T. H. D. Griffiths, H. C. Blankmeyer, G. A. Hulett, S. E. Munson, C. M. Bowcock, Helen Babb, O. F. Maxon, C. P. Colby, P. L. Taylor, Stanley Castle, C. W. Milligan, A. W. Barker, C. D. Wright, Roy F. Rogers, II. L. Metcalf, I. W. Metz, C. H. Walters, J. C. Walters, J. O. Salyers, O. B. Babcock, J. A. Princee, I. Bullard, J. L. Taylor, O. D. Taylor, Mrs. James C. Rigg, C. A. Lloyd, I. H. Taylor, H. T. Morrison, Jr., and R. D. Berry.

Decatur—F. M. Anderson, J. C. Fisher, Herbert C. Jones, Benjamin Bachrach, Tyler Meriweather, Oscar Yammel, M. W. Fitzpatrick, W. A. Dickson, M. P. Parrish, J. T. Miller, N. G. Myers and C. E. McClelland.

Grace Dewey, Josephine Milligan, and T. J. Pitner, of Jacksonville; J. J. Conner, of Peoria; W. A. Brittin, E. R. Motley, Edward K. Lockwood and E. G. Motley, of Virden; A. L. Brittin, of Athens; J. W. Robertson, of New Berlin; J. H. Hill, of Mechanicsburg; W. A. Milton, Jr., of Warrensburg; E. H. Brittin, of Auburn; H. B. Millhon, of Owaneco; T. W. Priest, of Williamsville; A. L. Stuttle, of Williamsville; W. E. G. Mays, of Dawson; J. R. Pierce, of Cornland; F. M. Wilbur, of Riverton; John Deal of Riverton; James R. Rigg, of Mt. Pulaski; James B. Herrick, of Chicago; J. W. D. Mays, of Illiopolis; John D. Colt, of Litchfield; J. Palmer Matthews, of Carlinville; W. W. Van Wormer, of Girard; L. G. Allen, of Litchfield; L. B. Wright, of Rochester; D. A. Morgan, of Nilwood; A. D. Kirby, of Chicago; Robert E. F. Lentje, of Buffalo, and G. B. Lutyens, of Buffalo.

During meeting the following editorial from the *Daily Record*, of Springfield, was read and the sentiment contained was endorsed by the society:

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SPRINGFIELD, ILL., MONDAY, NOVEMBER 9, 1908.

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### DOCTORS AND QUACKS.

The Sangamon County Medical Society will hold its ninth annual banquet at the St. Nicholas to-night, the function promising to be a notable one.

Dr. James B. Herrick of Rush Medical College, Chicago, will discuss "Methods in Diagnosis" and will, undoubtedly, demonstrate that medical science is making marked progress.

The leading doctors of the county will turn out for the occasion.

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But from no desire to find fault with the excellent program arranged for this enjoyable occasion, The Record respectfully suggests that the Sangamon County Medical Society would be even better employed in discussing "Doctors and Quacks" than "Methods of Diagnosis."

Springfield, perhaps, more than any other city of its size on earth, is largely in the hands of as questionable a gang of charlatans as ever infested a community.

A syndicate of quacks, generally reported to control five or six "medical" offices in Springfield, is reaping a rich harvest by preying on the credulity of the inhabitants of Sangamon county.

The "No Cure, No Pay" fake is right only to the extent that it is a pretty safe wager that there will be no cure.

But the pay end of it is exacted all the time and many men and women have learned to their sorrow that it is "Pay!" "Pay!" "Pay!" until they are driven to serious financial embarrassment.

The utter heartlessness of these charlatans is a matter of common gossip, yet new "suckers" are captured every day, fooled by the glittering promises of a syndicate that claims to be able to cure almost everything from galloping consumption to a broken neck.

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The Sangamon County Medical Society is composed for the most part of as able, clean and whole-hearted doctors as can be found anywhere on earth.

These men will do themselves and the community a lasting good if they can plan a way to rid Springfield of a set of leeches who are bringing disrepute to one of the most reputable and noble of professions.

The Sangamon County Medical Society met December 15 at the Carnegie Library, Springfield. Dr. C. S. Nelson, vice-president, and later Dr. Walter Ryan, president, presiding, and Dr. H. H. Tuttle acting as secretary in the absence of Dr. G. T. Palmer, regular secretary. Dr. O. H. Deichman, who has been in the government service at Ancon and other points in the Panama Canal Zone, gave a very interesting talk on the sanitary conditions prevailing in the Isthmus, which was enjoyed by the 20 members in attendance. According to Dr. Deichman's description, the government has made ample provision for the cure of the sick and injured workmen engaged in building the canal, and his stay of ten months in the government's service was full of interesting experiences, especially with tropical diseases. Yellow fever has been almost entirely eradicated,



but there is a great deal of malarial fever and dysentery still among the ignorant workmen. The climate, on the whole, was found to be quite agreeable and the American government has profited by the errors of the French who blazed the way for what is believed to be now a successful completion of the ditch.

Two new members, Drs. Morrison and Schultz, were elected and there was one application for membership.

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#### STEPHENSON COUNTY MEDICAL SOCIETY.

The autumn meeting of the Stephenson County Medical Society was held at the court house in Freeport on Thursday afternoon, October 8. The following members were present: Drs. Arnold, Burns, Clark, Hutchins, Kober, Mease, Moore, Rideout, Rosentel, J. W. Saucerman, Stealy and Snyder. The program was a very interesting one, and the papers of Dr. Mease and Dr. Stealy called forth quite a discussion. Several clinical cases were presented: one a case of sarcoma of the orbit with no return apparent after two months had elapsed since an extirpation of the orbital contents had been effected. Satisfactory use of "pitchblend" had been made use of in this case.

CASE 2.—The patient, a man 58 years old, who several months previous to being operated on for frontal sinusitis, had suffered great pain over the right eye—was unable to sleep. He later noticed a swelling just under the orbital arch to the nasal side. This swelling increased in size and caused a deviation of the right eye toward the temporal side and consequent diplopia. It was the last-named symptom that caused him to seek surgical aid. The partition between the two sinuses was broken open and drainage established, both through the nose and through the external opening. Good results were obtained.

The paper of Dr. D. C. L. Mease was well received. Dr. J. H. Stealy read a very exhaustive paper that treated the subject of Fractures of the Astragalus with Dislocation of Its Fragments. The doctor had reviewed the literature most thoroughly and gave a paper of great merit.

#### CONSERVATISM IN SURGERY.

D. C. L. MEASE, M.D., FREEPORT, ILL.

The advances made in surgery within recent years are wonderful indeed, and go to show what man can accomplish by his skill and close attention to the principles involved in the intricate processes of life in organized bodies, to conserve or restore that degree of harmony between the various parts and structures formed in full accord with Nature's laws.

The successful removal or alteration of offending structures in whole or in part, and the successful implantation of organs or structures, altered or destroyed by accident or disease, in whole or in part, are remarkable advancements in surgical science that completely revolutionize the older methods of surgical procedures, adding innumerable lives and years to the human race, as well as alleviating or mitigating the sufferings and undesirable conditions that have afflicted mankind from all time, or have been brought on by changed manners of living and changed conditions.

Conservative surgery has indeed had no small part in this production of good results, and has to a large extent done away with the wholesale destruction of injured structures whose vitality is such that the parts might be saved and prove of the utmost usefulness to the individual. To save useful parts is as important, if not more so, than to remove offending ones. It is our duty as conscientious surgeons to use every means in our power to turn back the patient into the world as a useful member of society.

I remember well the time when, in amputations especially, it was the rule to remove any parts, however useful and necessary they were to the welfare of the individual, if there was any question as to their recovery; but with the

advances made in asepsis and antisepsis, this is all changed, and the patient is given the benefit of the doubt. What we always feared in attempting to save severely injured parts were shock, hemorrhage and infection, and these, thanks to our modern surgical methods, are now less feared than formerly. Where shock is pronounced it is the consensus of opinion that it should be combated before any serious operation should be done, as any additional nerve shock may at once terminate the ease; but such necessary operations should be undertaken immediately upon the recovery from shock, for every moment of delay after that adds materially to the danger attending the injury. These are the cases where there is no question as to the evident uselessness of trying to save the injured member.

In minor surgery few of us but have been most wonderfully and agreeably surprised at the excellent results following the attempt to save portions of the fingers, where the injured parts simply hung by a few shreds of uninjured skin and in some cases entirely separated from other tissues. In one case, in my experience, a portion of the finger (three-quarters of the terminal phalanx) was drawn out of the patient's pocket with instructions to "sew that back on, Doctor." The portion presented was covered with dirt and tobacco, and the prospect of its living was any thing but propitious, but it was sewed and plastered on very carefully and, "*mirabile dictu*," in twenty-four hours it was adhering firmly enough and showing a trace of a pinkish tinge, which gradually assumed more nearly the health color, and the man to-day is a freight handler in the Freeport, I. C. R. R. service, with an entire finger, less one-fourth inch at the distal end, which refused to live and sloughed off. This sort of conservatism is the extreme, and although I have tried the same measure several times, only the once did I ever obtain desirable results.

I have had a number of cases that have given excellent results to conservative methods that have caused me to devote considerable time to its honest, conscientious and careful consideration where there is a reasonable chance to save rather than destroy. Primary amputations are no longer my aim, but rather, if possible, bridge patient over the first dangers and give Nature a chance to assert herself.

I recall two cases of crushing injuries to both bones of the leg: One in which fully three inches of the tibia and fibula were crushed to a jelly by the falling of a large clod of frozen ground upon the leg from a height of about three feet. At first it was thought that amputation was the only thing to be done, but I decided to give Nature a chance, and flexing the limb upon an incline plane with the body acting as counter-extension to a weight applied to foot, the limb was supported on each side by a sand bag. The fracture was a compound comminuted one, and through the opening in the skin for many days the fatty globules of bone marrow oozed out with the serum, while within the peritonemum, that retained its vitality, was the jelly-like mass of crushed bone, gradually giving way to new osteoblastic cells which changed it finally into solid bone, leaving little or no shortening to indicate the seriousness of the injury sustained.

Another case almost identical with this one gave practically the same results, where at first amputation seemed the only proper course—for had the cases turned out badly adverse criticism would have caused no end of trouble, and I assure you, brother practitioners, that it takes more courage to try to save making an amputation than to make one.

On Dec. 3, 1905, a brakeman received a severe injury, not only causing a fractured arm, but crushing the left foot and ankle so that the bones of the foot were broken into many pieces and the joint laid wide open with a hole extending through it from one side to another just below the malleoli, the skin laying back over the entire surface. The soft tissues, all exposed, bleeding, torn and filled with cinders, ground into them; hours were spent in removing cinders and useless lacerated tissues, and with but little hope that the leg could be

saved. The case was watched and attended to with extreme care. Dozens of small pieces of bone were removed and several times it was almost decided to amputate the foot, as the amputation was advised by a surgeon of wide experience, who considered the leg a useless member, which would never be of any service again, and yet, in spite of all this, the man is now working at his usual occupation of brakeman on the Illinois Central between Freeport and Chicago. Although laid up a year and a half with the injury, he recovered so fully that to see him walking the streets of our city, with only the suggestion of a limp, one not acquainted with the case would never believe the statement of the true condition of the limb after the injury.

Another case of a young man who as a brakeman was thrown from the top of a moving car by the sudden jerk of the train to a flat car below. In the fall struck his right ankle against the edge of the car on which he was standing, bruising and crushing soft tissues to such an extent that there subsequently sloughed out a mass three inches wide by four long over the outside of joint, exposing the external malleolus and parts under and about it. When he landed feet first on the flat car right ankle turned under the body weight and a typical Pott's fracture with four lines of separation occurred, while the ankle was dislocated outward and backward. The fractures and dislocation were reduced and held in place as nearly as possible, and although nothing could be promised of a favorable nature, as all the parts involved were crushed and soft tissues reduced to a pulp, yet good results ensued, and by skin grafting later on, the external malleolus was entirely covered and a useful leg results with but slight deformity.

I will report two more cases, showing the reward of patient and persistent effort in spite of adverse appearances when first seen, and in one case especially the desperate chances taken with the excellent results following.

On July 15, 1907, P. B., a switchman, working for the Illinois Central, stepped off the foot-board of an engine to make coupling and engine started up. In attempting to step back on the foot-board, blinded by the escaping steam, he missed it and was struck on the leg by the foot-board and thrown in such a way that the right foot was caught between the drawbars, severely crushing and fracturing the bones entering into ankle joint and one or two toes, stripping the skin from the whole of the inside of the foot, while the whole sole of the foot, including entire heel, was torn loose from tissues underneath and hanging by three inches of uninjured tissues simply attached along the outside of foot from outer malleolus on a line running toward base of little toe; the soft tissues were all torn to shreds, the deeper blood vessels and nerves alone remaining intact although uncovered and showing plainly in bottom of foot; the os calcis and most of the bones of the tarsus and metatarsus being almost entirely denuded of all coverings except their periosteum. Nearly three hours were spent in dressing this injury by the surgeons in attendance after it was decided to attempt to save limb, for the chances were most desperate. The soft tissues that remained partially intact were replaced as carefully as possible with no hope whatever of saving them, but of giving Nature a chance to show how much tissue could be retained. Hot moist gauze was kept constantly applied for many days, in fact two or three weeks, day and night, weakly impregnated with antiseptics. The temperature ran high with every symptom of absorption of more or less septic material and for over a week I was in readiness, at any minute, if the symptoms became too alarming, to amputate and combat in every way the pernicious effect already started in the general system; but at last after the closest attention to minutiae and the removal of gangrenous tissue as fast as a line of demarcation occurred, the threatening symptoms became less marked; the parts, although finally cleared of all the infecting and useless tissues, left a foot denuded of the entire sole and of all of its subcutaneous paddings, and the integument on each side of heel from one malleolus to the other. Occasional necrosed fragments of bone presented themselves

through the new granulations that were thrown out, and were removed, and in the course of several months the foot began to assume its proper form to a great extent; soft tissues were replaced reasonably fast enough, the fractured bones united kindly, the interspaces between the metatarsal bones filled up, the bones themselves were hidden from view and the parts were covered with a new padding, not of fatty tissue but of heavy granulations rounding off the heel to a natural plumpness, the skin growing in from all sides. At last after everything was ready for skin covering, the growth of the integument came almost to a standstill, as the cells were so attenuated they could not longer furnish proper material; then skin grafting was done and some of the skin grafts took hold at once, but owing to the large amount of surface to be covered and the fact that the abundant secretions from the new granulations washed some of the grafts away, repeated graftings had to be made. Owing to the pain produced in taking off the pieces of skin for the grafts, the patient suggested frog skin; the idea was novel at least and I agreed to try it. Receiving a consignment of frogs from the Chicago market in fine condition I at once began to prepare parts for the grafting. I applied six or eight grafts with great care, raising edges of skin newly formed and tucking an edge of the frog skin under it. Within twenty-four hours the grafts had become much thinner, although still firmly held in place, having been covered with oiled silk; within forty-eight hours hardly a vestige of the grafts remained, but it was noticed that a new layer of granulations of a bluish color were thrown out all around the edges of the denuded surface; these were followed by others, and after a day or two a small island of new skin granulations appeared here and there where the grafts had been, all of the same bluish tinge. When the granulation no longer seemed to appear another grafting was made with the same results, viz., the starting up of the skin granulation process from the edges of raw surface remaining and possibly new islands of skin. Thus grafting was done four times and the entire surface was covered with skin of a bluish tinge which gradually assumed the same color and characteristics as ordinary skin.

Another patient who had sustained a somewhat similar injury except that it was not so severe and to the dorsum of the foot instead of the sole, was subjected to the same kind of grafting at the same time and the same characteristic process of repair was noted and excellent results obtained, and he is at present employed here by the Illinois Central Railroad as a brakeman.

These cases show that to be conservative, which in reality means the employment of the highest judgment one is capable of, in aiding Nature and giving to the patient the best results irrespective of time and amount of care required and trouble caused, is always well worth the effort—for conservatism may mean immediate action to gain best results or mean long and arduous study and labor to produce the most desirable results that can be obtained within the limits of safety.

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#### VERMILION COUNTY.

The Vermilion County Medical Society was called to order in the City Hall at 8:30 p. m. This being the annual meeting, the secretary-treasurer's report was read and accepted. The election of officers resulted as follows: President, S. C. Glidden; vice-president, R. L. McCaughey; secretary-treasurer, Geo. Steely; delegate, E. B. Cooley; alternate delegate, Benj. Gleeson; censor, Rachel Cooper. Recess was taken to partake of a lunch provided by the committee. On resuming the session a motion was offered and carried that the secretary see that appropriate resolutions concerning the death of the wife of Dr. H. F. Becker be prepared and presented to the Doctor. After considerable discussion Dr. Miller offered a motion that the chair appoint a committee of five to confer with the druggists regarding the matter of illegal prescribing by the druggist. Carried.

Adjourned.

E. E. CLARK, Secretary.



## NEWS OF THE STATE.

### PERSONAL.

Dr. Arthur F. Beifeld has gone abroad.

Dr. Edmund J. Doering, Chicago, has returned from Europe.

Dr. and Mrs. Milton K. Eisenstaedt, Chicago, have gone to Europe.

Dr. Elizabeth Bentele, of Chicago, is studying in Berlin, Germany.

Dr. John C. Gunn, Belleville, has returned after six months abroad.

Dr. and Mrs. Frank A. Phillips, Chicago, are spending the winter in Arizona.

Dr. E. R. Van Meter, of Springfield, is reported to be defendant in a suit brought by his wife for divorce.

Dr. Joseph Springer, Chicago, has been appointed coroner's physician, vice Dr. Otto E. Lewke, resigned.

It is reported that Dr. L. O. Cox, of Murphysboro, has filed a \$3,000 bond to appear for trial on a statutory charge.

Dr. Charles F. Read, Geneva, has been appointed assistant physician in the Illinois Eastern Hospital for the Insane.

Dr. William B. Peck, Freeport, who has been abroad for a year, is expected to return and resume practice early in January.

Dr. Stephen V. Balderston has been appointed commissioner of health of Evanston, vice Dr. William R. Parkes, resigned.

Dr. August W. Meyer has been re-elected as city physician of Quincy for the year 1909 by the Adams County Board of Supervisors.

The condition of Dr. Sarah Hackett Stevenson, of Chicago, who has been ill for a long while in St. Elizabeth's Hospital, is reported to be critical.

Dr. Burton W. Hole, of Springfield, has retired from practice and will remove to Chicago from which place he will travel in the interest of a publishing house.

Dr. Daniel R. Brower, Chicago, has been appointed a member of the state committee having in charge the investigation of the Cook County Insane Hospital at Dunning.

Dr. Otto T. Freer, Chicago, has returned from abroad, where he demonstrated his septum operation at clinics in London, Edinburgh, Berlin, Vienna, and other cities.

Dr. and Mrs. John B. Hench, of Hinsdale, on Thanksgiving day, which was also their twenty-fifth wedding anniversary, were presented with a chest of silver by his patients as a demonstration of their appreciation.

What is supposed to have been a bomb was thrown into the automobile of Dr. Merritt O. Hoover, an official of the Chicago Health Department, December 7. Dr. Hoover said he had received several threatening letters prior to this occurrence.

Dr. R. G. R. Williams, formerly of Danville, has moved to Paris, Ill., and has established a laboratory for the use of the physicians in the surrounding territory. In addition to the ordinary microscopic and chemical, the modification of milk will be undertaken in this laboratory.

Dr. E. C. Dudley and family, Chicago, have returned from Europe. During his stay in Vienna, Dr. Dudley was elected an honorary member of the American Medical Association of Vienna, being the third individual to be thus distinguished, the preceding honorary members being Dr. Politzer, of Vienna, and Dr. William W. Keen, of Philadelphia.

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#### NEWS ITEMS.

The construction work of the new million-dollar tuberculosis hospital of Chicago for Cook County will begin very soon. The building permit has already been procured.

The surgeons of the staff of the Columbus Hospital, Chicago, have made a substantial donation to the institution by contracting to equip an operating room at a cost of more than \$5,000.

Dr. R. L. Watson, of Granville, Dr. E. F. Peterson, of Varna, and Dr. W. S. Morrison, of Minonk, were each, respectively, chosen coroner of the counties of Putnam, Marshall and Woodford at the late November election.

Dr. James B. Herrick delivered a memorial address relative to the late Prof. Frank Hugh Montgomery Thursday afternoon, Dec. 17, 1908, in the upper amphitheater of Rush Medical College, Wood and Harrison streets, Chicago.

H. Darwin McIlrath, president of a medicine company in Chicago, charged with practicing medicine without a license and prosecuted by the state board of health, is said to have been found guilty November 16 and fined \$100.

Miss Isadore Duncan's interpretation of "Iphigenia in Aulis," given for the benefit of the Children's Memorial Hospital and the Theodore Thomas Orchestra invalid fund, Chicago, December 8, is said to have netted more than \$10,000 for these charities.

The citizen's committee which recently investigated the Cook County Hospital for the Insane, Dunning, in its official report, recommended the establishment of a psychopathic hospital, where patients can be treated before being committed to the state hospitals.

On the ground that newspaper publicity is foreign to the principles of ethics of the medical profession, the Madison County Medical Society adopted resolutions at its last meeting deploring the practice and requesting the publishers of newspapers to omit the names of physicians and their deeds from their columns.

The new City Hospital in Chicago for the treatment of contagious diseases opened November 28, with four patients suffering from diphtheria. Dr. Margaret M. Jones has been appointed physician in charge. The capacity of the hospital is about 200. Only cases of diphtheria and measles will be received at the institution at present.

Dr. Archibald Church, the present editor of *The Chicago Medical Recorder*, will resign all connection with its editorial and business management with the December issue. The subsequent editorial direction of the journal will be either committed to an editorial board or otherwise provided for, and will be announced in the January issue.

Dr. James W. Pettit, president of the Illinois State Medical Society, under the auspices of the Monroe County Medical Society, delivered an instructive address to the laity of Waterloo, December 8, on "The Tuberculosis Problem," after which he addressed the society on "Medical Organization" and the "Ways and Means of Securing Full Attendance at County Society Meetings."

Drs. Bernard DeKoven and Alexander A. Whanond are said to have each been fined \$10 and costs, November 24, for failing to report cases of epidemic diseases to the commissioner of health, Chicago. For a similar offense, Dr. Peter T. Burns is said to have been assessed costs of \$7.75. Martin and Minnie Rudd, also of Chicago, were fined cost for permitting a child infected with contagious disease to break quarantine.

Plans announced by the president of the board of education of Chicago are to the effect that tubercular and subnormal children in the public schools of Chicago are to be segregated and provided with a special mental and physical training institute to be founded on a 240-acre tract of land in Riverside. Arrangements are also being made to provide a substitute for the present John Worthy School for Delinquent Children on the same tract of land.

The private pavilion of the Presbyterian Hospital, completed at a cost of \$390,000, was formally dedicated November 29. The dedicatory address was made by the president, Albert M. Day. Dr. Frank Billings also made an address. Seventy-five patients can be accommodated in the new wing of 58 private rooms. A sun parlor is the main feature of the building, the roof, one-half of which is enclosed in glass so that patients may enjoy the sun in any kind of weather.

The milk commission of Chicago, of which Dr. A. Belcham Keyes is secretary, has issued a physician's order blank, on the back of which is a list of stock formulæ of milk for infants and a list of the milk stations where the milk may be obtained. The commission also issues leaflets on "Buttermilk Good for Infant Feeding" and "How to Take Care of the Baby." The latter leaflet is supplied in seven languages and copies for distribution will be sent by the commission on application.

In a statement prepared by William C. Graves, secretary of the State Board of Charities, the average per capita cost in the seventeen charitable institutions of the state for the quarter just ended was \$43.19. The figures for the individual institutions were as follows: Hospitals for the Insane—Southern Hospital, Kankakee, \$29.23; Central Hospital, Jacksonville, \$33.03; Southern Hospital, Anna, \$33.30; Northern Hospital, Elgin, \$64.55; General Hospital, Watertown, \$38.61; Criminal Asylum, Menard, \$42.15; Institution for Feeble-minded, Lincoln, \$37.11; School for Deaf, Jacksonville, \$40.19; Girl's School, Geneva, \$44.83; Boys' School, St. Charles, \$54.96; School for Blind, Jackson-

ville, \$68.42; Orphans' Home, Normal, \$71.07; Soldiers' Home, Quincy, \$32.74; Widows' Home, Wilmington, \$67.14, and Industrial Home for Blind, \$77.60.

As the result of a year's work on the part of prominent Jewish club women, the Chicago Winfield Tuberculosis Sanitarium will be opened about January 1. The project to war on the white plague was made possible by the gift of Charles A. Stonehill, who has been elected president of the organization. Officers chosen are: First vice-president, Mrs. Emma B. Mandl; second vice-president, Mrs. I. J. Brown; recording secretary, Mrs. B. M. Engelhard; corresponding secretary, Mrs. M. L. Aren; treasurer, Mrs. Jacob Frank; financial secretary, Mrs. Sidney Handl; assistant financial secretary, Mrs. Leon Schutz. Mr. Stonehill's gift consists of a seventeen-acre tract at Winfield, Ill., thirty miles from Chicago on the Northwestern railroad. The estate includes a modern building of thirty-six rooms. The structure has been renovated and fitted with almost four hundred square feet of veranda space which will serve as outdoor sleeping quarters for the patients. The outdoor treatment is to be the special cure adopted. The institution is to be managed by a board of directors.

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#### MEDICAL SOCIETY NOTES.

At the meeting of the Jackson County Medical Society, Dec. 17, 1908, the following officers were elected for the ensuing year: Dr. C. O. Molz, president, Murphysboro; Dr. A. R. Carter, vice-president, Murphysboro; Dr. Ray B. Essick, secretary-treasurer, Murphysboro; Dr. R. S. Sabine, member of Board of Censors for three years, Murphysboro.

The Belleville Medical Society held its annual banquet and meeting at Belleville, December 14. The discussion of medical questions was a feature during the banquet. Big preparations were made and all of the physicians in the city attended. Dr. Edward H. Ochsner, of Chicago, addressed the physicians on "Vaccine Therapy in Joint Tuberculosis." Dr. Lawrence Ryan, also of Chicago, gave a talk on "Malignant Edema."

In response to a call from Dr. S. B. Cary, president, and Dr. J. F. Walsh, secretary, of the Alexander County Medical Association, there was a large gathering of members of the profession at the Commercial Club rooms, Cairo, Ill., December 10. The primary purpose of the gathering was to meet Dr. J. W. Pettit, of Ottawa, Ill., and hear him discuss the subject of membership in the state association; also to meet Dr. Mitchell, of Carbondale, who addressed the meeting.

The Cook County Hospital Alumni Association held its forty-seventh annual meeting, November 23, at the Illinois Athletic Club, Chicago, under the presidency of Dr. Samuel C. Plummer. The program included addresses by Dr. William E. Quine on "Nicholas Senn as a Man," by Dr. William L. Baum on "The New County Hospital," by Dr. Arthur B. Eustace on "Our First Regular Resident Staff," and by Dr. Theodore Ticken on "The County Hospital as a Field for Scientific Work."



An interesting and profitable session of the McLean County Medical Society was held Dec. 3, 1908, in the city hall at Bloomington, Ill., and there was a large representation of the profession present from that and neighboring towns. One of the interesting and instructive features was a paper which was read by Dr. Hart, of Bloomington, on the subject, "Tubercular Peritonitis." There was a general discussion of this subject and also of the general topic of tuberculosis and the matter of establishing a county sanitarium was given some attention.

At the meeting of the King County Medical Society, Washington, November 2, it was decided that all doctors having contract practice, such as lodge, labor union, department store, hospital association, etc., should be excluded from membership in the society, and the present members were given until Feb. 1, 1909, to sever their connection with such organizations, under penalty of expulsion. The society also concurred in the plans advocated by the state association, whereby the county society shall share equally with the state society and the state medical board the expense of the prosecution of illegal practitioners in those cases that terminate successfully. In the unsuccessful cases the county societies bear none of the expense.

An enthusiastic meeting of the Rock Island County Medical Society was held in the Hotel Harms, Rock Island, December 8, and was attended by a large part of the society's membership. A symposium on pneumonia occupied that part of the evening which was devoted to study, and papers were read by several of the members under the general head "Pneumonia." The "pathology and etiology" of the disease was taken up by Dr. A. E. Williams, the "synopsis and diagnosis" was taken up by Dr. F. H. First, while the "Treatment of Pneumonia" was discussed by Dr. G. L. Eyster. A lunch was enjoyed and a business session followed, during which several new members were taken in and several proposed for membership. The next meeting of the society will be held in February.

The Physicians' Club of Chicago, at its first meeting of the year, Nov. 27, 1908, discussed the subject of "Drug Therapy; Past, Present and Future." Dr. William E. Quine acted as chairman for the evening and the following program was given: 1. "The Causes of Drug Nihilism," Dr. Bernard Fantus. 2. "Some Therapeutic Misconceptions and Fallacies," Dr. Joseph L. Miller. 3. "The Present Status of Drug Therapy," Dr. William E. Quine. 4. "The Clinical Value of Experimental Therapy," Dr. A. S. Loevenhart, professor of pharmacology, University of Wisconsin. 5. "The Proper Teaching of Therapeutics in the Medical Schools," Dr. George F. Butler. The discussion of this subject was provoked by the interest for a better knowledge, on the part of physicians, teachers and students, of the action and limitations of drugs. We have written in these pages before of the evils which have existed from the growth of the nostrum business. The insufficient knowledge of the student as he leaves the medical school has made him a ready and willing victim of the detail man. In the discussion many incidents were cited of recent graduates who were woefully uneducated in the art

of prescription writing. Dr. George F. Butler made a statement in his paper that the proper teaching of materia medica and therapeutics in the medical schools would soon eliminate the proprietary and nostrum business. Drug nihilism is leading to the growth of various cults and mental healers. The department of psychotherapy has shown the medical profession this much neglected branch of study and with an increased knowledge of this means of treatment by the general practitioners will aid in the complete undoing of the Christian Scientist and similar organizations.

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### PUBLIC HEALTH.

Smallpox has been reported at the following towns: Peoria, Herrin, Fulton, Schuyler county and Logan county.

Diphtheria has been reported at Gladstone, Mattoon and the North Infirmary of the Illinois Eastern Hospital for the Insane at Kankakee.

Several cases of milk sickness have developed in the neighborhood of Morris, Ill., causing the death of a child, 8 years old, and an adult, a hired man, both residing in that city.

Scarlet fever is reported at the following towns: Crystal Lake, in McHenry county; Illinois State Institution for Deaf and Dumb at Jacksonville; Moline, New Holland, Aurora, and Collison.

It is reported that the following medical inspectors have resigned from the department of health in Chicago: Fred Zapffe, J. C. Friedman, Harry Kahn, Kellogg Speed, William Hassert, H. M. Richter, Frank X. Walls, J. L. Fleming, F. S. Churchill, Walter H. Buhlig, Robert Sonnenschein, Frank G. Harris, Allen B. Kanavel, Clifford G. Grulee, Maurice L. Blatt, and John A. Riley.

The Illinois State Board of Health has just placed contracts for the diphtheria antitoxin for free distribution in the state, the contract this year being awarded to Dr. H. M. Alexander & Co., of Marietta, Ohio. The antitoxin made by this company was selected by the board at its meeting in Chicago, October 20, when the bids of a number of manufacturers were considered. The legislature has made a biennial appropriation of \$30,000 for the purchase and distribution of diphtheria antitoxin.

*The Bulletin* of the Department of Health of Chicago gives the following report on the health conditions for November:

"The month of November passes into the record with a total of 2,425 deaths, 144 more than the preceding month and 216 in excess of the corresponding month of last year. The death rate was 7 per cent. in excess of the ten-year average of this month. As compared with November, 1907, the following diseases show an increased mortality: Diarrheal diseases, 98 more; consumption, 57 more; Bright's disease, 41 more; diphtheria, 38 more; heart diseases, 22 more; nervous diseases, 13 more; measles, 9 more; bronchitis, 8 more; cancer, 7 more; scarlet fever, 2 more, and suicide, 4 more. There were, similarly compared, 56

fewer deaths from pneumonia, 30 fewer from convulsions, 10 fewer from typhoid fever, 7 fewer from influenza, and 3 fewer accidental deaths.

Statement of Mortality: Month of November, 1908, compared with the preceding month and with the corresponding month of 1907. Death rates computed on United States Census Bureau's figures of midyear populations, 2,166,055 for 1908, 2,107,620 for 1907:

	Nov., 1908.	Oct., 1908.	Nov., 1907.
Total deaths, all causes.....	2,425	2,281	2,219
Annual death rate per 1,000.....	14.00	12.41	12.81
Sexes—			
Males .....	1,357	1,316	1,260
Females .....	1,068	965	959
Ages—			
Under 1 year.....	437	510	384
Between 1 and 5 years.....	203	200	168
Between 5 and 20 years.....	179	140	164
Between 20 and 60 years.....	1,046	946	977
Over 60 years.....	560	485	526
Important causes of death—			
Apoplexy .....	46	59	43
Bright's disease .....	200	182	159
Bronchitis .....	63	47	51
Consumption .....	303	238	246
Cancer .....	113	124	106
Convulsions .....	0	1	30
Diphtheria .....	81	67	48
Heart diseases .....	225	188	203
Influenza .....	3	3	10
Intestinal diseases, acute.....	211	342	113
Measles .....	15	2	6
Nervous diseases .....	66	66	53
Pneumonia .....	275	205	331
Scarlet fever .....	48	36	46
Smallpox .....	0	0	0
Suicide .....	28	36	24
Typhoid fever .....	34	31	44
Violence (other than suicide).....	137	148	140
Whooping cough .....	4	7	6
All other causes.....	573	499	560

### CHANGE IN LOCATION.

Dr. Daniel D. Raber has located at Plano, Ill.

Dr. J. M. Schearl, of Sherman, has removed to Urbana, Ill.

Dr. E. T. Alford has removed from Chicago to Waterloo, Iowa.

Dr. S. W. Latham has removed from Harrisburg to Eldorado, Ill.

Dr. Susanna Orton has removed from Chicago to Darlington, Wis.

Dr. G. M. Tyrrell has removed from Apple River to Elizabeth, Ill.

Dr. E. M. Brooks has removed from Charleston to Beecher City, Ill.

Dr. A. L. Golightly, of Beecher City, has removed to Carbondale, Ill.

Herbert D. Wentz, M.D., has removed from Chicago to Verona, N. D.

Dr. E. S. Everett has removed from Amboy, Ill., to North Attleboro, Mass.

Dr. R. Herrick has removed from La Salle, Ill., to Oklahoma City, Okla.

Dr. R. K. Keitch, of Decatur, Ill., has removed to Oxford Junction, Iowa.

Dr. Charles E. Klontz has removed from Rockford to Cherry Valley, Ill.

Dr. T. A. Wallace has removed from Naples, Morgan county, to Decatur, Ill.

Dr. J. B. Hazell, of Hoopston, Vermilion county, has removed to Flora, Clay county, Ill.

Dr. F. R. Morgan, who located in Kokomo, Ind., a few months ago, has removed to Onarga, Ill.

Dr. F. H. Langhorst announces that he has removed from El Paso to No. 1566 West Fourteenth Place, Chicago.

Dr. W. G. Murray, of Dayton, Ohio, has moved to Springfield, where he will practice medicine, with his office at 4020 North Ninth Street.

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### MARRIAGES.

IRA M. MILLER, M.D., to Miss Alice A. Strake, both of Chicago, October 21.

ROY WHITE MCCLINTOCK, M.D., to Miss Mattie Anna Weber, both of Chicago, November 14.

OTTO O. GAEBE, M.D., Addieville, Ill., to Miss Alma B. Wilde, of New Athens, Ill., December 2.

SAMUEL D. DONOVAN, M.D., Dewey, Ill., to Miss Pearl Hoffman, of Lovington, Ill., December 5.

J. GUY ALLAN, M.D., to Miss Blanche Claypoole, both of Edgewood, Ill., at St. Louis, October 28.

GEORGE SILAS DUNTLEY, M.D., to Miss Nola Blanche Seibert, both of Bushnell, Ill., December 2.

WALTER FOREMAN WICKES, M.D., to Mrs. Katherine Young Robert, both of Chicago, December 16.

JOHN J. MCINTOSH, M.D., Allendale, Ill., to Miss Hester Isabel Holsen, at Robinson, Ill., October 3.

THOMAS S. EGAN, M.D., Napletown, Ill., to Miss Winifred M. Leonard, of Newark, N. J., November 25.

JOHN GLENN YOUNG, M.D., Pontiac, Ill., to Miss Floy Martha Reynolds, of Genoa Junction, Wis., October 28.

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### DEATHS.

JOHN M. DAVIS, M.D. (years of practice, Ill., 1896), died at his home in Hamilton, Ill., December 6, aged 75.

HENRY J. PATTEN, M.D. Eclectic Medical Institute, Cincinnati, 1883; died at the home of his daughter in Chicago, December 15, aged 69.

EDWARD ANTHONY MOCK, M.D. Bellevue Hospital Medical College, New York City. 1896; died at his home in Cambridge, Ill., November 21, from heart disease, aged 37.

ANDREW J. WALLACE, M.D. Starling Medical College, Columbus, Ohio, 1869; of Decatur, Ill.; died in St. Mary's Hospital, East St. Louis, October 6, from nephritis, aged 67.

WILLIAM A. TOPE, M.D. Rush Medical College, Chicago, 1887; of Downers Grove, Ill.; died, December 11, in Albuquerque, N. M., where he had gone in the hope of bettering his health, aged 49.



EDITH A. ROOT, M.D. Northwestern University Woman's Medical School, Chicago, 1875; a pioneer practitioner of Denver, Colo., and for some time president of the Denver Clinical Club; died at her summer home in De Kalb, Ill., from pneumonia, November 26, aged 67.

CHARLES ROSS PARKE, M.D. University of Pennsylvania, Philadelphia, 1847; for many years a practitioner of Bloomington, Ill.; one of the founders of the Illinois Medical Society; died at the home of his daughter in Louisville, November 6, from cerebral hemorrhage, aged 85.

ERNEST A. MATTHAEI, M.D. College of Physicians and Surgeons, Chicago, 1895; of Chicago; a member of the Illinois State Medical Society; associate in obstetrics at the Evangelical Deaconess Hospital and assistant in surgery in the Chicago Polyclinic Hospital, died December 1908, in Sierra Madre, Cal., aged 40.

SAMUEL D. CULBERTSON, M.D. Jefferson Medical College, 1866; a veteran of the Civil War, having been wounded at the battle of Fredericksburg. He came to Illinois in 1866 and had practiced in Piper City, Ford county, ever since, and was the oldest practitioner in the county for some time; for many years had been prominent in the various medical organizations and in the work of the Grand Army of the Republic. He contracted pneumonia while in the active pursuit of his practice, and died at his residence in Piper City, November 12, having just entered upon his seventieth year.

THOMAS M. WILSON, M.D. Rush Medical College, 1908; A.B., Sc. of the University of Toronto; about to receive the degree of Ph.D. from the University of Chicago; an interne in the Presbyterian Hospital and instructor in pathology in the Chicago Veterinary College; who had devoted all his leisure for a year past to experiments in the laboratories of the McCormick Memorial Institute in an attempt to produce a serum to counteract the effect of the bacillus of glanders; died, November 19, in the Presbyterian Hospital, from glanders; after an illness of three weeks, aged 38, a martyr in the cause of scientific research.

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## Book Notices.

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THE PRACTITIONER'S VISITING LIST FOR 1909. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, publishers, Philadelphia and New York.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Chicago, and Frederick Peterson, M.D., New York. With 341 illustrations; 6th Edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company, 1908. Price, cloth, \$5.00 net.

This standard work, which in about nine years has gone through six editions, besides a number of reprints, and has become a standard text-book in most of

the medical colleges of all schools, has made its appearance again, with a thorough revision which brings it up to date in every way, showing that it is destined to retain the place it has held so long. We bespeak for this new edition the cordial reception which has been meted to all of its predecessors.

**PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS.** By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College, Philadelphia. With 212 original illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Price, cloth, \$3.50 net.

For many years the work known as "DaCosta's Physical Diagnosis" has been before the public, and this work by the younger DaCosta perpetuates in a worthy manner the best predictions of the older work. The photograph and radiograph have done much in this work to help the printed pages in conveying the proper impression to the mind of the student. This work will easily take rank with the best before the profession and can be heartily recommended to our readers.

**A TEXT-BOOK OF GENERAL BACTERIOLOGY.** By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Fully illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Price, cloth, \$3.00 net.

The medical student or practitioner who would keep abreast of the times can not afford to be without this valuable work by Professor Jordan. In a volume of 557 pages, amply illustrated, he brings the subject of Bacteriology completely up to date and presents the subject in a satisfactory and entertaining way. Not the least valuable of the subjects considered are found in the chapters dealing with the bacteria in the arts and industries and in the air, soil and water. We trust that this excellent work by Professor Jordan will meet a cordial reception in Illinois.

**ARTERIOSCLEROSIS: Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis and Treatment.** By Louis M. Warfield, A.M., M.D., Instructor in Medicine, Washington University, Medical Department. Eight original illustrations. C. V. Mosby Medical Book Co., St. Louis, Mo., 1908. Price, cloth, \$2.00 net.

This work of 165 pages is in fact the monograph upon a subject which is demanding the studious attention of the profession. The author says in his preface: "The wear and tear on the human organism in our modern way of living is excessive. Hard work, worry and high living all predispose to degenerative changes in the arteries and so bring on premature old age. We have tried to emphasize this by laying stress on the prevention of arteriosclerosis rather than on the treatment of the fully developed disease." The book is well worth reading and can be advised to our readers.

**A HAND-BOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE.** By Henry S. Munro, M.D., Americus, Ga. Second Edition. C. V. Mosby Medical Book Publishing Company, St. Louis, Mo., 1908. Price, cloth, \$3.00 net.

This work by Dr. Munro, who gives his place of residence in the crevices in two of the smaller cities of Georgia, strangely enough is registered by Polk in still another city, will appeal to many practitioners of Illinois and the West, because Dr. Munro has traveled over a great part of this territory, giving personal instructions to classes of practitioners on the subject of Hypnotism and Suggestive Therapeutics. While Dr. Munro probably carries his ideas of this subject to an extreme, yet the book is well worth reading in view of the tendency to mental therapeutics now prevalent in all circles.

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## ORIGINAL ARTICLES

### THE EFFECTS OF VACCINE THERAPY IN JOINT TUBERCULOSIS.\*

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CHICAGO.

In considering the effects of vaccine therapy on tubercular processes in joints, it is manifestly impossible to determine their exact influence, because we would not be justified in discarding the other therapeutic agents which have proven themselves efficient in the treatment of this condition. However, I believe that we will be able to show that vaccine therapy has a very decided and, if properly applied, beneficial effect upon tubercular joints and can now be looked upon as a valuable adjunct in the treatment of joint tuberculosis. The question of sufficient suitable food, plenty of fresh air and prevention of secondary infection having been fully covered in a previous communication, I will confine myself in this paper to a consideration of the influence of proper immobilization and vaccine therapy upon the progress of the disease with special reference to the ultimate mobility of the joint.

I take it for granted that this audience is thoroughly familiar with the principles of vaccine therapy as taught and practiced by Wright, and consequently will not go into this detail further than to say that, while I agree with the critics of Wright that the opsonic index can not be determined with absolute accuracy, I believe that a careful, conscientious laboratory worker can ascertain such variation in the opsonic index as is essential to avoid the administration of such large or frequently administered doses of vaccine as would cause too great a depression of the opsonic index, or to administer a new dose during a pronounced negative phase. This, after all, I consider the most important reason for a careful reading of the opsonic index.

\* Read before the Chicago Medical Society, December 9, 1908. For discussion see page —.

If patients with joint tuberculosis come to the surgeon sufficiently early, if they are placed under proper hygienic conditions, if suitable measures are adopted for the prevention of secondary infection, if the joints are perfectly immobilized for a sufficient length of time, and if vaccine therapy is instituted under control of the opsonic index, I believe that the great majority of cases will secure perfect or nearly perfect functional and anatomic results. Many teachers have taught and are still teaching that long continued immobilization of an inflamed joint favors ankylosis. This teaching is theoretically untenable and contrary to clinical experience, as I believe we will be able to prove.

Volkman taught us, and I believe correctly, that the primary lesion in joint tuberculosis is usually located in the bone and that in the majority of cases the joint involvement is secondary. Clinically the first thing that is usually noted is a moderate degree of pain, followed in a varying period of time by an effusion into the joint and an attempt at immobilization of the joint by the surrounding muscles. The two signs, effusion and rigidity, should long ago have taught us that when an inflammatory process exists in a joint our efforts should be directed toward preventing contact and friction between the opposing articular surfaces. This can best be accomplished by sufficiently prolonged absolute immobilization of the joint. If active and passive motion is permitted, or, as is sometimes done, even encouraged, the endothelial coverings of the joint cartilages are very apt to be damaged. If two opposing surfaces become thus abraded, we are almost sure to have fibrous ankylosis. If active and passive motion is vigorous enough and prolonged enough, the cartilage also will become destroyed in places, and if opposing surfaces of the joint cartilages become destroyed bony ankylosis is sure to follow. Proper immobilization with undisturbed joint effusion will prevent this undesirable termination in a very considerable per cent. of cases, especially if it is further aided by vaccine therapy.

For the past two years we have been using vaccine treatment as a routine procedure in all of our cases of tuberculosis for whom it was convenient to remain in or near the city, and rather early in our experience it seemed to me that tubercular cases thus treated reacted more quickly, and in joint tuberculosis it appeared that when the last cast was removed ankylosis of the joint was less common and less severe. It is, of course, too early to reach absolutely definite conclusions on this point, as many of the cases are still under treatment and the final findings can not yet be recorded. However, the greater mobility of the joints was sufficiently pronounced to attract my attention, and I have consequently since that time made a rather critical study of the patients with special reference to this point, and naturally I tried to discover what the reason or reasons might be for this difference in the healing process.

About this time I had three very interesting cases of bilateral tubercular cervical adenitis. In each case I did a radical operation on one side, then placed the patient on vaccination treatment for from six to eight weeks and then operated on the other side. In each case I noticed the following facts: The glands first operated upon had their ordinary



gland capsule, but, in addition, a very considerable deposit of pericapsular connective tissue, the vascularity of the parts being about as is usually found in these cases. When operating the second time quite a different condition was found. While the gland capsule was about the same as at the first operation, the periglandular connective tissue had almost entirely disappeared, the glands were very much more freely movable and the surrounding tissues were much more vascular than they had been at the previous operation—so vascular, in fact, that there was general capillary bleeding with every cut of the knife or snip of the scissors, interfering very seriously with rapid dissection. I have since observed the same condition twice—in fact, in all cases, five in number, in which there has been a considerable interval of vaccine treatment between the first and second operation.

If the above observation is correct and if it will be substantiated by future cases and other observers, it will explain why there is less ankylosis in cases of joint tuberculosis treated with vaccination than is the case if treated by the ordinary method. We have long been taught that tuberculosis is cured by a process of exclusion, because this is the process we have been able to observe and follow as healing has progressed. So far as I know, other methods of healing have not been recognized, and yet it seems more than probable that there are other methods, for in the perfect healing out of a tubercular peritonitis it is hard to conceive that it has all been a process of exclusion and sclerosis. To further substantiate this view, I might cite two cases of tubercular cervical adenitis which had received no vaccination treatment in which there was little or no periglandular connective tissue found at the operation.

The healing process of tuberculosis is usually described as a proliferation of fixed tissue cells, which later develop into mature connective tissue which in contracting slowly constrict and ultimately obliterate all the blood vessels, resulting in fatty degeneration, then in necrosis and finally ending in calcareous deposits. In other words, the tubercular process is walled in and the tubercle bacilli starved.

The process of healing, which we believe we have observed here, is evidently entirely different; it is fundamentally a phagocytic process, a process of vascularization instead of sclerosis; it is a tearing down of the connective tissue wall, giving the phagocytes an opportunity to destroy the tubercle bacilli. The two processes may be likened to the two recognized methods of warfare, one a siege with the cutting off of supplies and provisions and the ultimate starvation of the garrison, and the other the destruction of the walls of the fortress with heavy artillery with a final charge and a hand-to-hand combat with the garrison.

I do not wish to consume your time with a detailed report of the cases thus treated, nor even with a statistical summary, but will briefly give the history of two cases, one a simple tuberculosis of the knee, the other a tuberculosis of the knee complicated by mixed infection. In this way I hope to be able to emphasize and elucidate some of the points above brought out.

H. H., male, age 17, tailor, first placed himself under my care May 11, 1907, with a history of having been well to the age of fourteen, when he fell, injuring right knee, experiencing slight pain, but had no further trouble until four months later, when knee became swollen, painful and motion restricted. Shortly after this, knee was aspirated, injected and apparently rather ineffective attempts made to immobilize same. Later again injected, finally put on Bier's treatment. When first seen by me, general nutrition fair, weight 145 pounds, examination negative except that right knee was greatly swollen, boggy, extremely painful on slightest passive motion, active motion impossible, held rigid at an angle of about 140, unable to bear weight, temperature varying during the course of the next week between  $98\frac{3}{5}$  and  $100\frac{3}{5}$ , pulse between 80 and 120, opsonic index .6. As it was impossible to straighten the knee, the patient was anesthetized, the knee, placed at an angle of 175, plaster-of-Paris cast applied from the malleoli to the tuberischium, vaccination treatment instituted, after a few days patient allowed to get up, cast left in place for four months, at the end of which time the patient had gained so much in weight that the cast had to be changed. The second cast was left in place eleven months. When this was removed, patient's general health excellent, weight 177 pounds. On inspection, knee perfectly normal, straight, active motion about 20, passive motion 30, opsonic index during the last year having varied between 1.1 and 1.7.

J. B., male, age 34, blacksmith, came under my care May 21, 1907. The essential points of his history are that 28 months previously, after an illness described by him as la grippe, both lower extremities from the knees down to the toes became swollen. After the swelling subsided the patient noticed that the right leg could not be fully extended. This limitation of motion had persisted ever since. Fifteen months before his admission a swelling developed on the outer side a little below the right knee. Eleven months before admission this abscess was incised and drained, three months later this was done again, drainage continued for three months and intermittently from that date until the day of admission. On admission the patient was found considerably emaciated, the right knee was markedly swollen, slightly flexed, rigid, but not completely ankylosed, active motion impossible, slightest attempt at passive motion caused excruciating pain, leg and foot swollen, drop ankle, several sinuses discharging pus, temperature during the succeeding weeks varying between  $97\frac{4}{5}$  and  $104\text{ F.}$ , pulse 66 to 128, opsonic index on admission .6. The patient was anesthetized, the right lower extremity immobilized in a fenestrated plaster-of-Paris cast with the knee at an angle of 175 and the ankle at 85, patient put to bed and vaccination treatment instituted. As soon as the extreme tenderness subsided he was allowed to sit up, later to walk with crutches with a high sole under the good foot, and finally when the tenderness in the knee joint had entirely disappeared he was allowed to walk with ordinary shoes and a cane. The patient rapidly gained in weight and strength, his temperature and pulse became normal, and when the cast was removed on Aug. 20, 1908, the right lower extremity, except for some atrophy of the muscles, made a practically normal appearance, the sinuses being entirely healed and about 30 passive motion being possible without the slightest pain or discomfort.

I feel sure that you will agree with me, even from these short histories, that here we had two very unfavorable cases and that the results are certainly most satisfactory. If these were the only cases thus treated they would prove very little, but we have had quite a series of similar cases involving practically every joint of the extremities, in which we have secured similar gratifying results.

In the treatment of joint tuberculosis, our chief attention has been directed to the question of mortality. This is as it should be. We have not paid too much attention to this question, but we have paid very much too little to the question of morbidity. It is in order to give this phase

of the subject its due prominence that I have devoted this paper more especially to the effects of vaccine therapy on the tubercular process in the joint itself. I am fully convinced, however, that when properly employed in a large series of cases vaccine has a threefold effect: First, it reduces the mortality; second, it hastens convalescence, and, third, it improves the ultimate functional results.

In reference to mortality I believe that, while practically every case of joint tuberculosis which comes to a competent surgeon reasonably early can be cured, I am convinced that in the past two years we have had several late neglected cases get well which would have succumbed without the aid of vaccine therapy.

The second question, the period of complete disability, is a matter of very great importance. Many of these patients are poor and can ill afford a long siege of sickness; every week or month that the illness can be shortened means much to them. Of still greater importance is the question of ultimate functional result, because most of these patients are young, and if the result is unsatisfactory they will have to get along with their deformity, often work with a very considerable handicap for many years, while if the result is good they will be able to meet their competitors on an equal footing.

Barring the mental anguish and the physical pain which each case involves, the last two items, the period of convalescence and the ultimate functional result, are purely questions of personal and public economics. It is our duty to shorten the illness as much as possible and to give these patients the best possible joints, in order that they may be of the greatest use to themselves and to their fellow-men.

In conclusion, I wish to state that I am very well aware of the fact that a relatively small number of cases covering a short period of time can not furnish absolutely conclusive evidence, but the experience we have had thus far has been so uniform that I deemed it of sufficient importance to report thus briefly.

Up to a few years ago we were very well satisfied if we were able to bring a case of simple tubercular arthritis to a successful healing of the tubercular process without surgical intervention, and we were quite satisfied if we accomplished this result with ankylosis, providing the limb was ankylosed in a useful position. Just recently I was informed that one of the most prominent continental orthopedic surgeons still considers this the ideal for which we are to strive in these cases. A larger joint with mixed infection sometimes resulted in the death of the patient, often in the loss of the limb and very commonly in persisting sinuses. I believe that now we can practically always save the life and limb of such a patient and sometimes, as in the last case above cited, even secure a useful joint. In tubercular joints uncomplicated with mixed infection, we can, if the patients come to us sufficiently early, secure perfect functional and anatomic results in the great majority of cases.

THE MOTILITY OF THE STOMACH, A VALUABLE FACTOR  
IN THE DIAGNOSIS OF GALLSTONE DISEASES.\*

MILTON R. BARKER, M.S., M.D.

CHICAGO.

Moynihan makes the following observations: "It is an undoubted fact the commonest manifestations of the presence of gallstones is never referred by the patient, and rarely by the medical man, to the gall bladder or bile duct. The most cursory examination into the history of a large series of cases treated by operation will show that, in almost all, the early symptoms, that which for years caused intense suffering at times, is "indigestion." The variety of names given to the symptoms of epigastric pain, nausea and vomiting is infinite: "indigestion," "gastric catarrh," spasms," "flatulent distension of the stomach." are a few of those most frequently encountered. They all, as can be seen, refer the trouble to the stomach and not to the liver.

Not only is the above eminently true, but it is also a fact that a very large proportion, possibly a majority of gallstone diseases, never utter any other symptomatology than that referred to the stomach and quite uniformly credited to indigestion. And that a large per cent. of these cases terminate in disaster, a correct diagnosis not being made, and proper treatment never instituted.

That the most serious conditions may develop in and about the gall bladder and gall ducts due to gallstone diseases that have never developed a symptomatology except that referable to the stomach has been proved by operations in the abdomen for various causes time and again by finding, unexpectedly or otherwise, the most serious conditions in these organs, the development of which has evidently required long periods of time and the remedying of which has cured the whole case, promptly and effectually.

This class of cases, we believe, has been passed over too lightly and has not been given the prominence that should belong to it, the feeling probably being that these cases were rather curiosities than a common condition, the thought not being harbored many times, by those brought in contact with them, that these cases formed a definite class of gallstone diseases because of their peculiar symptomatology and frequency. While it is true some of the special workers in this field, like Mr. Moynihan, have long appreciated the importance of this class of cases, and have with no uncertain sound called attention to it, medical men generally have not comprehended its significance. Although some have discussed these cases, so far as we know, no definite procedures have been outlined, or any rules promulgated, by which this class of cases may be differentiated from true gastric lesions, with a reasonable degree of certainty. And we believe it is wise to halt here, excepting to state in a general way the procedures that have been helpful. We all recognize

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\*Read before the Chicago Medical Society, Dec. 9, 1908. For discussion, see page 231.



the difficulty of bringing others to see things as we see them; hence their difficulty in applying our rules. But there are some general procedures, if carefully observed and followed, will lead to the truth. Of these we may speak. We can best illustrate that which we wish to elucidate by quoting and comparing our first two cases in which we were able to recognize the true condition. In the fall of 1905 the following case came under my observation and care:

Mr. J., 48 years of age. Family history negative. Patient had complained of "indigestion" for eight years. All his symptoms were referred to the stomach except constipation, with which he had been troubled during all of the period of indisposition. He had been treated by different medical men for various stomach lesions, and for nervous dyspepsia, the majority of the diagnoses being the latter. All treatments had been unavailing. The most prominent symptoms prevailing when I first saw the patient were the ones that had prevailed during the whole period of illness, and were as follows: Either a ravenous appetite, or a loathing of food. As to time, these two opposite conditions prevailed about equally during the clinical history. As to the time of occurrence or duration, both were very irregular. For instance, the former might be present in the morning and the latter at noon, or either might continue for several days. Sometimes the loathing was for all kinds of food, and then, again, for only certain kinds, or the patient might loathe a certain kind of food in the morning, and crave the same food at noon. Patient would at times go to the table feeling hungry and in a moment loathe everything in sight. There were but two things that could be depended upon concerning these two conditions, both were sure to appear at some indefinite time, and both were sure to disappear in the same manner. At first there were long intervals when the patient was free from both conditions, but as time passed these intervals grew shorter, and when the patient came under my observation he seldom experienced total relief from both conditions. There was never present gastric distress, that could be attributed to the taking of food, either at times when he loathed or craved it. He could eat as heartily of that which he loathed as of that he craved, so far as gastric distress following was concerned. The second symptom in the case was nausea. The patient was frequently nauseated, but never vomited. The nausea bore no relation to the time of eating, nor the amount or kind of food ingested, or whether food was taken at all. There was no regularity as to the appearance, disappearance or continuance of it. It would come on at any time and remain an indefinite period. It might last an hour or a week. The condition grew more aggravated as time went on. The third symptom in the case was pain. This pain was rather constant after eating, but at no special time after eating. It might, and often did, come in five minutes after the ingestion of food or it might not come for six hours or at any time between. The patient had tried many times to locate this pain but could not do it. At times he was sure he could put his finger over the exact spot, but when he attempted this the pain was seemingly at another place, or had ceased for the time being. The patient always located the pain somewhere in the epigastrium. The patient had lost thirty pounds of flesh in six months.

Physical examination was negative. The examination of stomach contents was as follows:

Chemical.		Microscopical.	
Total acidity.....	48°	Pus.....	Absent
Free HCl.....	32°	Mucus.....	Absent
Combined chlorides.....	28°	Starch.....	Present
Organic acids.....	2°	Yeast cells.....	Present
Lactic acid.....	Absent	Oppler Boaz B.....	Absent

Motility of stomach normal.

The evidence adduced from these examinations did not support the idea of a serious intrinsic gastric lesion, but in my judgment ruled out the possibility of such a condition. I made a probable diagnosis of gall-bladder disease due to gall-stones, and advised exploratory operation, which was accepted and performed.

The gall-bladder was sclerosed and attached by adhesions to the omentum, transverse colon, pylorus, and duodenum. The adhesions were broken up, and the remnant of gall-bladder removed. Patient made a prompt recovery, and has had no recurrence of his former troubles.

This ease, though uttering no language usually understood as the expression of a gall bladder in distress or of gallstone disease of any nature, was, nevertheless, such a ease. The contemplation of this ease was sometimes fraught with regrets especially when we reviewed other eases, that had come for help, but had gone without relief, *because we did not know*. But as our most impressive teachers are our greatest errors (surely we ought to be excellently schooled), we received a moiety of comfort. In the winter of 1906 a second case come under our care which, for purposes of comparison, we relate:

Mr. C., aged 54 years. Family history negative. The prominent symptoms in this case are the same now as when the case began, but had been aggravated, and grew more serious during the ten years of his illness. In this respect like case No. 1. The prominent symptoms were, first, vomiting. This occurred without the slightest nausea, and with no relation to the taking of food, or of the kind of food taken. This patient vomited as readily when the stomach was empty as when supplied with food. Sometimes the vomit was mucus tinged with bile, and again only empty vomiting or gagging occurred. The vomiting was irregular, coming on suddenly and unexpectedly and lasting more or less continuously from an hour to a week. This was followed by an irregular interval of from one hour to six or seven days.

The second symptom conspicuous in this case was a sensation of some foreign substance or body irritating the stomach walls. The patient could not clearly explain or describe this sensation. It did not cause pain, but when present he believed caused more distress than any pain he ever had. This sensation was very irregular in coming and going. It came most frequently in the night, though the days were not free from it. He said he dreaded these spells much more than the vomiting. The third symptom of which he complained was a weight or load in the pit of the stomach. This was not always present, but came and went at irregular intervals. Physical examination was negative, though repeated several times.

Examination of stomach contents after test meals was as follows:

Chemical.		Microscopical.	
Total acidity.....	62°	Pus.....	Absent
Free HCl.....	47°	Mucus.....	Absent
Combined chlorids.....	38°	Starch.....	Present
Organic acids.....	3°	Yeast cells.....	Present
Lactic acid.....	Absent	Oppler Boaz B.....	Absent
Motility of the stomach normal.			

We advised exploratory operation which was accepted and performed. The gall-bladder contained 33 stones impacted in it. The ducts were free. The stones were removed and the gall-bladder drained. The patient made a rapid and complete recovery, and has remained well ever since.

A comparative study of these two cases reveals four significant facts: First and one of the most important, the family history in each is negative. In what respect negative? There is no discoverable trace of a neurotic tendency in either of these patients, or their families. I consider this the first and most important fact to be settled. If there is a neurotic history connected with these cases, the probabilities are there is no pathology removable by the surgeon, and the case belongs to the neurolog-

ogist, or perhaps in the domain of psychotherapeutics. Let me repeat: *Too careful a study of each case in this particular can not be made if success is to crown our efforts.* The second point for comparison is, the symptoms complained of in each case are those of indigestion referred to the stomach, but their manifestations are irregular, erratic and not conformable to any definite type of stomach lesion. The third point of interest in these two cases is, while the symptoms in each are of an erratic nature, they are totally different in each case, showing that in this class of cases almost any combination of symptoms mimicking indigestion may be present. The fourth condition, and the most important of all, diagnostically, is, the motility of the stomach was normal in each case.

The above facts were carefully noted and filed for future reference.

Since the above, 29 other cases belonging to this class have come under my observation and care, in each of which have appeared a symptomatology, a cursory examination of which would lead to a diagnosis of gastric indigestion. But a careful painstaking study of the manifestations of each symptom forming the pathologic picture showed the symptom-complex to be atypical of any intrinsic gastric lesion. In no two of these cases did we find the same combination of symptoms. But in every case the symptoms first noticed continued throughout the case unchanged, except in severity. The motility of the stomach was normal in each case, and in each case a neurotic tendency was carefully looked for and excluded.

We have made in each of these cases a probable diagnosis of gallstones or gallstone disease and have advised exploratory operation. Nine only have thus far accepted the advice. In these the diagnosis has been verified and the conditions fully relieved, two of which have been related above. The other 20 are under observation, but have received no benefit from any method of treatment instituted. These cases had all been diagnosed and treated by different medical men, the diagnoses most frequently being "nervous dyspepsia." Since this paper was written two more of these cases have submitted to operation and the diagnosis fully verified.

The facts impressed by the study of these cases and the theories developed by reason of them are about as follows: Gallstones or gallstone diseases develop and progress for a long period of time and consummate the most serious lesions of the gall bladder and ducts and terminate in disaster to the general system, without any evidence of their existence being manifest, except in a group of symptoms referable to the stomach and usually attributable to "indigestion." The study of these cases has impressed us with what we believe to be a fact, that if a careful scrutiny is made of each symptom that appears in any group which forms the pathologic picture in any case belonging to this class of cases we will find the majority of these symptoms tend to a reflex origin rather than to faulty digestion, and that in every case where these so-called symptoms of gastric indigestion prevail and the motility of the stomach is

normal the lesion is extrinsic to the stomach, and in the large majority of cases wherein a neurotic tendency can be excluded the pathology is in the gall bladder or ducts, the removal of which, surgically, will remedy the whole case.

From our study of these cases we believe that if a very large proportion of gallstone cases are to be recognized, we must learn to recognize them from a peculiar symptomatology which is referable to the stomach, and not from the so-called classical symptoms, characterized by severe spasmodic or colicky pains, chills, perspiration, prostration, soreness and enlargement of the liver, which are the symptoms of moving stones and occur usually as late symptoms of the disease, and possibly only in a minority of cases.

We have found the following a safe rule by which to be guided: In diseased conditions the symptomatology of which is referred to the stomach, in which the motility of the stomach is normal, and a neurotic tendency can be excluded, we may reject a diagnosis of an intrinsic gastric lesion, and conclude that a pathologic condition exists in some organ more or less remote from the stomach, of which the apparent gastric lesion is only a reflection. If pain is one of the prominent symptoms, especially if it has no relation to the time of the ingestion of food, we should be very suspicious of a gall-bladder or gall-duct lesion due to gallstones. While the motility of the stomach is a valuable factor in the diagnosis of this form of gallstone diseases, it is by no means the only factor. Its only service is its determining influence as to whether or not the lesion, or condition, is intrinsic or extrinsic to the stomach.

We must bear in mind that in all of these cases there are three propositions that must be passed upon. First, is the lesion an intrinsic gastric lesion? The normal or abnormal gastric motility will, in my judgment, in a very large percentage of cases, settle this question. If decided not intrinsic, is the case a veritable pathologic lesion in some organ more or less remote from the stomach, of which the apparent stomach lesion is only a reflection? Or is the case a neurologic or psychologic condition? To substantiate either of these propositions is a task in every case, and in some cases impossible, without the aid of exploratory measures. To pass intelligently upon these cases, one must have before his mental vision the various pathologic pictures of intrinsic gastric lesions. We must know and properly weigh all of those conditions that may be present which characterize either an intrinsic or extrinsic gastric lesion. For instance, there may be present a hyperacidity of the stomach contents; this may stand for gastric ulcer or cholelithiasis, or it may be a case in which the hyperacidity is only apparent. The personal equation of the patient must be determined and taken into account. All the impressionable faculties of the medical man must be brought in contact with these cases, and all impressions received referred to that ego within us made alert because of experience and study for final judgment of the case.



## PAPILLARY OVARIAN CYSTS.

SYMPTOMS: PROLIFERATING PAPILLARY CYSTOMA OF THE OVARY;  
OVARIAN CYSTOMA; PAPILLOMATOUS OVARIAN CYST; MULTI-  
LOCULAR CILIATED CYSTOMA.\*

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## DEFINITION.

A cystic tumor growing from the hilum of the ovary and consisting of a connective tissue wall with dendritic, papillomatous growths covered with a cylindrical epithelium and containing a viscid fluid; the papillomatous growths may penetrate the cyst wall and infest the neighboring peritoneal surfaces, such as the broad ligaments, uterus and intestines. It is supposed to arise from the Wolffian body. They range in size from a pea to a man's head, and may be nearly all cystic or nearly solid. Estor<sup>1</sup> believes the solid papillary ovarian tumors begin as cysts in which the excrescences proliferate on the interior of the cyst until it is a solid mass of cauliflower growth.

## ETIOLOGY.

Williams<sup>2</sup> says "the growths are derived either from the Graafian follicles or germinal epithelium: their origin from relics of the Wolffian body or from the tubal epithelium, while possible, has yet to be demonstrated." Nagel<sup>3</sup> points out that the germinal epithelium is frequently preserved under peritoneal adhesions about the ovary, and that the irritation of inflammatory changes might lead to a proliferation of germinal epithelium with the formation of pseudo-Pfluger's ducts and the development from them of all forms of ovarian tumors.

## PATHIOLOGY.

In nearly all cases where there are excrescences on other organs there is ascites; this ascites may be the only symptom complained of by the patient. Emrys<sup>4</sup> (Robert E.) believes this fluid to be a secretion of the epithelium covering the papillary projections, and he gives the following conclusions in regard to the origin and growth of these tumors:

1. Primary superficial papilloma of the ovary is derived from the germinal epithelium and underlying connective tissue stroma.
2. The acini of the periphery of the ovary are derived from ingrowths of the germinal epithelium.
3. The vesicles which form so large a proportion of the papillary projections result from papillæ whose connective tissue cores have undergone edematous degeneration.

\* Read before the North Shore Branch of the Chicago Medical Society.

1. Estor: *Gaz. des hop.*, 1906, April.

2. Williams (J. W.): *Johns Hopkins Hosp. Bull.*, Baltimore, 1891, vol. II, p. 149.

3. Nagel: *Archiv. f. Gyn.*, 1887, vol. xxxl, p. 327.

4. Emrys (Robert E.): *Jour. of Obstetr. and Gyn. of the British Empire*, 1908, February, pp. 96 and 99.

4. The secondary deposits arise from disrupted papillæ; the dissemination of secondary deposits is favored by ascites.

5. The collection of fluid in the abdomen represents the secretion of the epithelium forming the outer covering of the growth.

#### CLASSIFICATION.

Pfannenstiel (J.)<sup>5</sup> makes the following grouping as the result of his researches: The ovarian papillomata are of three kinds:

1. Papillary adenoma.
  - (a) Pseudomucinous.
  - (b) Simple or ciliated.
2. Papillary adenocarcinoma.
3. Mixed tumors.
  - (a) Papillary adenosarcoma.
  - (b) Papillary carcinosarcoma.

Papillary adenoma form about 16 per cent. of ovarian papillomata. They are a variety of the glandular tumor. They do not invade neighboring parts, nor do they cause metastases. Can not be said to be malignant. Ciliated papillary adenoma form about 35 per cent. of ovarian papillomata. They contain thin, cloudy, serous fluid, never colloid stuff. Metastases do not occur. Ascites is present in about 60 per cent. Papillary adenocarcinoma form nearly 50 per cent. of ovarian papillomata. They rarely exceed a man's head in size. Often present macroscopical signs of cancer. Grow more quickly than adenomata. Cause cachexia and great ascites. Papillary adenosarcomatous cyst: The clinical features of this tumor are those of malignancy. Rapid recurrence after apparently complete removal.

Semb<sup>6</sup> believes these papillary ovarian cysts may be divided into malignant and non-malignant, and that the malignant are so from the beginning, and that the non-malignant never become malignant. Pozzi<sup>7</sup> regards them as forming "but one clinical and anatomopathological group," having two important features: First, ascites in connection with external vegetations; second, disseminated growths over the visceral and parietal peritoneum, and not always malignant. Some never undergo malignant degeneration. Griffith and Williamson<sup>8</sup> class them as on the borderline between non-malignant and malignant growths. Cohn (E.)<sup>9</sup> gives a very interesting description of the change from the benign to malignant growths. Levi<sup>10</sup> thinks any of them may become malignant. The uterus may become involved through the rupture of lymphatic glands, frequently in the uterus.

5. Pfannenstiel (J.): *Centralbl. f. Gyn.*, 1893, vol. xvii, p. 577; *Archiv. f. Gyn.*, 1894-5, vol. xlviii, p. 507.

6. Semb: *Om de Papullaere Ovarial-Kystomer*. Oscar Semb, Kristiana, 1896, p. 107.

7. Pozzi: *Am. Jour. Obst.*, N. Y., 1904, vol. lv, p. 433; *Tr. Am. Surg. Assn.*, Philadelphia, 1904, vol. xxii, p. 87.

8. Griffith and Williamson: *System Gyn.* Allbutt, Playfair, Eden., 1906, p. 425-428.

9. Cohn: *Ztschr. f. Geburtsh. u. Gyn.*, 1886, vol. xli, p. 22.

10. Levi: *Annali di Obstetricia Ginecologia*, 1904, vol. xxvi, p. 340; *Arch. di ostet e ginec.*, Napoli, 1904, vol. xl, p. 289.

## FREQUENCY.

Netzel<sup>11</sup> states that in 264 operations on ovarian tumor 20 per cent. were found to be papillary ovarian cysts. In many of these cases an operation was not deemed advisable. The author reports one case to show the existence of a solid papillomatous tumor on one side and a cystic papillomatous tumor on the other side.

The first case recorded in literature was in 1812 by Prochaska.<sup>12</sup> By a careful review of the medical literature I can find only 365 cases recorded. In six of these cases, judging from the history, the diagnosis was doubtful, and they were likely not papillomatous ovarian cysts. I have not considered these, making a total of 359 cases reported. The age was given in 276 of these cases; the youngest was 16, and 6 were under 20; 43 were between 20 and 30: 78, or 28 per cent., were between 30 and 40; 135, or 49 per cent., were between 40 and 60, and only 14 of them were over 60 years of age. In 188 cases the domestic state was not given, and in 171 in which it was stated seven were single and 164, or 96 per cent., were married. Forty-six of these were sterile, while 28 were unipara and 85, or 51 per cent., were multipara.

## SYMPTOMS.

The symptom of ascites was noted in 217 cases, being present in 173 and absent in 44 patients. In 183 both ovaries were involved, while the history was doubtful on this point in 28 cases. In 149 cases there were adhesions to neighboring organs. Those having excreescences on neighboring organs were 137. In 98 there were no excreescences other than the affected parts. In 124 this history was not stated. The uterus was involved 68 times, and 169 times there was no involvement, while in 122 cases their history on this point was absent or doubtful.

Of the 359 cases, seven died before operation, and in 113 cases the result of the operation was not stated. Out of 239 cases where the results were stated, there were 38, or 15 per cent., deaths—a very good result considering the class of patients and facilities for doing work at the time it was done. In 198 cases no statement was made about metastases, or recurrences, or secondary operations. In 161 in which these points were noted, there were 34 secondary operations; 61, or 31 per cent., had metastases; 38 of these 161, or 23 per cent., were stated to be malignant.

The following cases occurred in the service of Dr. Bussey and myself at the Ravenswood Hospital:

CASE 1.—Patient aged 48 years, multipara, menstrual periods regular, 28 days type of about four days' duration, no hemorrhage. Appetite and digestion good. During last year has noticed a gradual increase in size, and during the last two months has been uncomfortable on account of size of abdomen. Physical examination revealed abdomen filled and very tense with fluid, and a mass the size of a small child's head on right side of pelvis. Operation Sept. 14, 1907. Marked ascites, large cauliflower mass in place of right ovary. Uterus, tubes, broad

11. Netzel: *Hygiea*, 1887, vol. xlix, p. 151.

12. Prochaska: *Disquisito anatomico physiologica organismi*, Vienna, 1812, p. 170, Tab. v.

ligaments, and intestines covered with warty excrescences. Left ovary also papillomatous, size of small fist. Metastases in great and small omentum. Both ovarian cysts and tubes removed. None of the excrescences were removed. Diagnosis: Papillomatous ovarian cyst which had become carcinomatous. Uneventful recovery from operation, but a gradual reaccumulation of fluid until in two months it was necessary to remove same by buttonhole incision. Patient died of recurrent carcinoma, April 8, 1908.

CASE 2.—Patient aged 43, multipara, menstrual periods have been regular until last year, since when they have been irregular, with more profuse flow and pain. During last year, patient complained of backache, pain in lower part of abdomen, made worse by standing or walking, and considerable gaseous distention made worse by large quantities of food; frequent and painful urination, together with constipation. At operation, a large papillomatous cyst of the right ovary was found, with excrescences on broad ligaments, uterus and bladder, also intestines. Left ovary was cystic, filled with pus and carcinomatous. Metastases was found in omentum. There was some ascites. All pathological tissue was removed as far as possible, and the patient made a recovery, but sooner or later will have a recurrence.

From a review of the literature on this subject, one is justified in the following conclusions:

1. That papillary ovarian cysts are more common than was formerly held.
2. Apparently much more common in the married, 96 per cent. married, and in those who have borne children, 51 per cent.
3. Ascites is a frequent symptom, being present in 79 per cent.
4. The disease usually starts in one ovary and then spreads by rupture of the cysts and the grafting process to the surrounding organs covered with peritoneum until both ovaries were involved in 55 per cent. of the cases, and excrescences appeared on other organs in 58 per cent. of the cases.
5. The tumors have a greater tendency to become malignant than was formerly supposed. As many as 23 per cent. were malignant where this point was definitely stated, and metastases occurred in 37 per cent. Probably the malignancy is even greater than this, as many of the cases were not followed to their end.

#### TREATMENT.

With practically no mortality and a very slight recurrence, if removed early, and the probability of 37 per cent. or more becoming malignant, it evidently is our duty to diagnose and remove these tumors early. With 59 per cent. involving both ovaries, and the showing in these histories that when the recurrence takes place it is usually in the opposite ovary, broad ligaments, or on the uterus, it should be the practice of every surgeon to remove both ovaries and uterus if to the slightest degree involved. This seems to be in harmony with the experience of some of the leading surgeons of the day. On this subject Dr. A. J. Ochsner<sup>13</sup> says: "My method consists in removing the cyst, both ovaries, Fallopian tubes and the uterus, and as much of the broad ligaments as

13. Ochsner: Personal Communication.



I can without endangering the ureters. The recurrence in my experience has always been in the broad ligaments."

Dr. W. J. Mayo<sup>14</sup> says: "As to papillomatous ovarian cysts, we have had a very high percentage of cures since we have practiced the removal of both ovaries and tubes and supravaginal hysterectomy. It has formerly been our experience that when we removed a tumor of one side a second tumor often followed on the other side, and later a few cases eventually returned with cancer of the body of the uterus, so that the complete radical operation can be expected to cure a very large percentage of cases."

If there are recurrences, reoperate and remove all papillomatous tissue it is possible to remove, unless the case is hopelessly malignant.

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### HYPERPLASTIC ULCERATIVE COLITIS.\*

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The pathologic conditions of the large intestine, cecum, colon and sigmoid have received less attention by the surgeons than stomach, duodenum and rectum. We are better informed about the changes in these organs than at any previous time, thanks to the frequent autopsies *in vivo* of the modern surgeons. Quite different are the conditions of the cecum, colon and sigmoid. The terms of colitis and dysentery comprise a number of widely different pathologic changes, with more or less similar symptoms. I publish the findings of a few cases of this rare condition, particularly of one, which I had the opportunity to observe very accurately.

The term "colitis ulcerativa" was coined, according to German writers, by Boas, in 1903. From the clinical as well as from the pathological standpoint, I should, therefore, say that the pathologic condition which I describe, and of which I demonstrate specimens and patient, is a pathologic entity which at present can not be called by a better term than hemorrhagic grave colitis.

After careful study of the cases on record, I should say that there is one characteristic feature about all of them, namely, that they have nothing to do with dysentery. This latter disease is better known, has been studied well, and its pathology, particularly its etiology, is better defined.

Ulcerative colitis seems to be bound to no particular age. Rosenheim mentions a child of 6 years. I have in mind a number of cases of former years which I would place in this category, but I have only four cases which I have positively diagnosed as such and treated accordingly, and which I use as the basis of this paper. Two of them are those of young men of 20 and 27, one of 48, and one of over 50 years of age.

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14. Mayo: Personal communication.

\* Read before the Chicago Medical Society, Dec. 2, 1908. For discussion, see page 224.

## REPORT OF CASES.

CASE 1.—Mr. Z., about 50 years of age, came to me complaining of severe intestinal disorder. For several months he has had pain in the lower abdomen, especially left side, with alternately constipation and diarrhea, with blood and mucus in stool. During last few days he is constipated almost to obstruction. He thinks he is suffering from aggravated case of piles. Examination reveals enormously distended abdomen, dullness and tenderness on left side. Examination of rectum shows bowel velvety and congested, easily bleeding, and filled with masses of feces and hemorrhagic purulent discharge. Patient is treated locally with irrigations for some time, but bleeding grows alarmingly worse, so that an explorative laparotomy is performed. We find the large bowel thickened up to the splenic flexure; the sigmoid, particularly its ligament, infiltrated. An opening in the colon is made and the bleeding mucosa everted, and a left inguinal colostomy performed. Irrigation with astringent solutions continued for weeks, patient gradually recovering. A year later the fistula is closed by operation. This case was not fully appreciated by me at that time (three years ago) as colitis ulcerativa gravis, as I did not know much about the pathology of these conditions and the literature available on that subject was limited.

CASE 2.—L. S., a young man of twenty, came to me complaining of pains in the abdomen, especially on the left side, and a constant desire to have a passage. His stools, six to ten a day, were bloody. He was anemic and had the appearance of a very sick man. I directed him to go to the hospital immediately, and put him to bed. An icebag was applied to the abdomen. Examination revealed anemia of high degree, 55 per cent. hemoglobin, a pulse easily compressible, heart with anemic murmurs. Local examination of the rectum showed no piles, but a velvety, easily bleeding mucosa of the rectum, with polypous excrescences which would bleed on the slightest touch. Great tenderness over sigmoid and whole colon; distinct thickening even externally palpable. Examination of the stool showed it contained a very large amount of blood, no tubercle bacilli or amebæ, but lots of pus cocci. The color of the passages was that of dark prune juice, with clots, patient having six to ten and more passages a day. Local and general treatment was begun. All the remedies known as hemostatic, internally and externally, were given; irrigations with astringents were tried; tubes of different forms introduced to produce pressure—all without avail. Patient grew steadily worse. Temperature daily as high as 100° to 101° set in, and a characteristic marantic edema of lids and around the joints appeared. Starving and pure albumin feeding were useless. Finally, I decided to make a right colostomy, reasoning that the discharge of the feces from the cecum would probably remove the irritation. Patient not being able to take general anesthetic, I decided to perform operation under cocaine. Patient bore the operation very well, while working on abdominal wall, but suffered a great deal when an attempt was made to pull on the cecum or colon. Both seemed so thickened and shrunk that they could not be brought forward, and it was decided that an ileostomy be made. Patient rallied after this and immediately began to improve. His discharges diminished to one or two daily, became more purulent, of a bright reddish-yellow color, and on one occasion the discharge was pure pus. No fecal matter passed through the rectum. He gained in strength, was able to sit up, leave his room and be outdoors for hours. I had every hope of succeeding in my efforts to stop the pathological process, when patient again began to lose ground, blood in the discharges reappearing, and, although the ileum discharged normal secretions, the large bowel kept on bleeding. His pulse grew worse and the ominous marantic edema and rheumatoid pains set in again. He was obliged to take to his bed, and there I had to use heroic means, deciding to excise the whole large bowel. Gas anesthesia was decided upon and a median incision was made and the sigmoid, colon descendans, transversum and ascendans were found shrunk to a very short tract thickened and brittle. Starting above the rectum, cutting it across, the distal end was closed by purse-string suture. It was difficult to suture, as the threads seemed to cut through. With difficulty the ligating and cutting were continued to

the hepatic flexure near the ileostomy, and there the proximal end of the bowel was sewed into the abdomen to prevent stagnation in a blind pouch. Patient rallied and apparently was doing well for five days; then he collapsed, and died. An abdominal autopsy revealed a mushy condition of the stump, but no peritonitis, and no other cause for his death could be found but anemia and its result. The specimen shows macroscopically all signs of hyperplasia, edema of the strata, multiple ulcerations of different sizes, one particularly large and deep ulcer in the sigmoid. Microscopic examination shows a diffuse inflammation of the mucosa and submucosa, edema and infiltration, and hyperplasia of the muscular strata.

Hemorrhagic ulcerative colitis is a disease which is from the start chronic. Most of the patients do not pay much attention to their trouble until it reaches a dangerous state, their initial symptoms usually being treated for "nervous disorder of the bowels," or hemorrhoids, or similar light disorders. Two symptoms bring them under the care of the physician—pain and hemorrhagic diarrhea. The former is a sort of dull pain in the lower abdomen, particularly over the sigmoid region, preceding defecation. At times the pain may be very severe and more than once an error has been made and the case taken for appendicitis (Zacharie). The stool is hemorrhagic, liquid, often brownish, but mostly like prune juice. If the hemorrhage is profuse, clots of blood are discharged, three and four stools daily, but often ten and twenty liquid blood defecations have been observed. The odor is very offensive, showing a great deal of decomposition is going on. When the stool stands awhile a characteristic change is visible. It forms a bloody gelatinous seum on top, which on microscopical examination is found to be almost entirely cell detritus and pus. Many times pus is clearly visible.

The microscopic examination of the stools shows the same findings with great regularity, viz.: pus cells and epithelial detritus, with a large number of different micro-organisms. Most of the ordinary pathogenic and non-pathogenic germs found usually in the bowel are represented, cocci and colon bacilli being prevalent. The culture also shows a prevalence of the latter two species. Our observations as well as those of others show that tubercle bacilli and ameba, Shiga and Flexner bacilli, are absent. This alone would differentiate the process from dysentery were it not for many other clinical as well as pathologic peculiarities. An injection into the rectum of a guinea-pig of the fresh discharge of a patient has produced no symptoms whatsoever.

The course of the disease is very different, according to the gravity of the case. The true cases of this category run a chronic course of weeks or months, some of them years, the gravest ones ending fatally, no matter what therapeutic measures are tried. The patients become weaker in consequence of the serious losses of blood; the anemia, with all the characteristics of a secondary anemia, reaches a high degree, so that their mucous membranes and conjunctivæ appear entirely washed out, a certain marantic edema takes place, with swellings of the joints and pains like rheumatism. They run an irregular fever, not too high, but steady during intervals up to about 101 or 102 degrees; their pulse becomes flabby and suppressible. If the condition subsides, as in two

of my cases, one of which is entirely healed, we observe normal conditions of blood and temperature. In the severe type nothing will produce an improvement.

This leads us to the possible complications: ulcerations of the bowel must eventually lead to infiltration of the mesentery, infection of glands, and general septic conditions, although, in most of the cases, the latter have been very chronic. Marantic thrombosis has repeatedly been observed, as well as abscesses in the groin and metastatic, retroperitoneal and in the liver. Ulcers have healed and led to strictures, with obstruction. Swelling of joints and other complications usually found in chronic sepsis are often recorded. Perforation of the bowel and peritonitis are also mentioned.

#### PATHOLOGIC FINDINGS.

The objective symptoms, as far as the bowel is concerned, are scant, because palpation will reveal little and inspection with the rectoscope is not very satisfactory, as it permits a view of only a short portion, which in most cases is the portion least affected. I have examined all four cases with the sigmoidoscope, as have other observers, and we could see only a bleeding, congested mucosa, which would give no indication of the process higher up.

The macroscopic examination of the specimen removed shows the same changes all over. Even the muscularis is thickened, infiltrated and edematous, as is the submucosa. The mucosa is hyperplastic, forming regular polypi, and between them are ulcers which go down to the muscularis. Microscopically the picture tallies with these findings. There are the polypous excrescences of the glandular part adjoining deep ulcerations, infiltration and edema everywhere, and groups and clusters of micro-organisms. Other observers who had opportunity to make post-mortem examination have found that some cases hardly showed an ulceration. In such cases a general oozing from a congested mucous membrane must have caused the bleeding.

#### ETIOLOGY.

About the etiology little is known. Altogether the cases which I here cite gave me the impression that the base of the trouble is a very chronic septic process of some kind, of specific organism, which unfortunately we can not demonstrate.

#### THERAPY.

The therapy of grave inflammation of the bowel depends upon the gravity of the case and the stage in which the pathologic condition comes under our case. The possibility of the development of such a serious condition from a simple colitis, especially the recurrent slight hemorrhage, ought to keep our attention. In the earlier stages the medicinal and dietetic treatment will no doubt be efficient. Wegele (*Therapie der Magen und Darmkrankheiten*) outlines the treatment very clearly.

Absolute rest is indispensable. The diet must be regulated from the standpoint that anything which forms clumps in the bowel or leaves



large residues is to be avoided. Medicines internally are useless unless the cause is achylia gastrica, in which case HCl is of great value.

Thus we arrive at what all call the *ultimum refugium*, the surgical treatment, and here we find that most observers have agreed on the ileostomy or colostomy, with individual modifications, for the reason that the removal of the infected feces from the bowel, its renewed infection, and the possibility of irrigation by means of such an opening in the intestine, which would give the bowel rest and cleanliness, seemed, on the whole, to give satisfactory results.

Nehrkorn, from the Clinic Czerny, Heidelberg, has written a résumé of 34 cases treated in this manner. The first case was operated upon by Folet in 1885, a cecostomy being performed. The patient died five days after operation. The first successful case was operated upon by Prof. Franzesco Durante in Rome, with Dr. Navaro, in 1887, and was cured in four months. The credit of priority is due them. Mayo Robson operated his first case in 1893. Hale White and Golding Bird, of London, reported three cases in 1899, two being membranous colitis and one chronic dysentery, or a grave colitis in our sense of the term. They recommended the operation as curative, and urged leaving the bowel open as long as possible, but preferred colostomy to cecostomy, because of easier closure subsequently, and because of better control of the evacuation. Norman Dalton is of the same opinion.

Czerny operated three cases, reported by Nehrkorn. He recommends the left inguinal colostomy and dispenses with irrigations. Out of the 34 cases, 5 died. A colostomy on the right side was performed in 16 cases, with the result of 6 successes and 3 failures, and on the left side in 9 cases, with a result of 7 successes and 1 failure. Keatly and Weir recommended the implantation of the appendix into the abdominal wall, using same for irrigation (appendicostomy). Summers opposed the idea, the lumen being too narrow for the introduction of a catheter.

I have performed the ileostomy once, using the opening only for evacuation, as an attempt to irrigate was followed by great pain each time and was useless. In another case I performed a left inguinal colostomy, which proved to be perfectly successful, terminating in a complete cure.

Another method highly recommended by some authors (Moszkowicz) is the exclusion of the bowel by implantation of the ileum into the sigmoid flexure. This method has proven to be successful in some cases. But I will show in a skiagram that contents may pass through an excluded bowel.

Cases in which the symptoms persist, notwithstanding that the bowel has been drained a due length of time, are lost unless something further is done for them. In one such case I decided to take most heroic measures, viz., the removal of the colon and sigmoid. This method was first advocated by Arbuthnot Lane—not for this disease, but for plain constipation. This author has made use of the ideas of Metchnikoff in regard to the value of the bowel, and has, in a few cases, removed part, and in one the entire tract. The report does not give the final results,

but, since it is technically and physiologically possible to live without a large bowel, I decided in this otherwise hopeless case to make this attempt. The case proved fatal, but in studying it I must say that had I performed the operation sooner or at first I might have succeeded. Should another like case come under my observation, I certainly will not wait to perform this operation *in extremis*, but will do so earlier with a view of good results.

In conclusion, I will say:

1. The hemorrhagic grave type of colitis is a clinical entity.
2. It is pathologically characterized by hyperplastic polypous condition of mucosa, ulceration, edema and fatty degeneration of all the strata of the bowel.
3. It usually extends throughout the large intestine.
4. In many cases, even of the most chronic type, it is possible to arrest the disease by dietetic and local treatment.
5. Some cases, however, persist in growing steadily worse, notwithstanding treatment, and, therefore, need surgical interference.
6. In the majority of such cases a colostomy, preferably on the left side, will cause the case to terminate in a cure.
7. In extreme cases a removal of the whole tract of the large bowel may be made, it being technically feasible.

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### TREATMENT OF PNEUMONIA.\*

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I wish to preface my remarks upon the treatment of pneumonia by the following quotation from Osler: "Pneumonia is a self-limited disease and runs its course uninfluenced in any way by medicine. It can neither be aborted nor cut short by any known means at our command. Even under the most unfavorable circumstances it will terminate abruptly and naturally without a dose of medicine having been administered. So also, under the favoring circumstances of good nursing and careful diet, the experience of many physicians in different lands has shown that pneumonia runs its course in a definite time, aborting sometimes spontaneously on the third or fifth day, or continuing until the tenth or twelfth. We have, then, no specific treatment for pneumonia. The practitioner may bear in mind that the patient is more often damaged than helped by the promiscuous drugging which is only too prevalent."

These are words of wisdom spoken by one of the master minds in medicine, and they are fully concurred in by the vast bulk of the medical profession in this and other lands. We are all only too prone to confound the effects of drugs with the compensatory powers of the body for neutralizing pathologic processes, and so think that because crisis occurs soon, following the administration of this or that drug, therefore, we

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have a specific. But one swallow does not make a summer and so we find that the crises following these so-called specifics are very far from a Eureka. By this I do not mean to say that the pneumonia patient needs no medicine. It is just as absurd to declare that nothing can be done for him medicinally as to throw down the reins of a runaway horse because he can not be stopped immediately. Many times life is saved by proper management. By management I mean to include nursing, diet, hygienic surroundings, physical therapeutic measures and medication.

The institution of intelligent hygiene, of careful nursing, of proper diet and the mitigation of the most distressing symptoms is in order. Nothing could be considered too slight or insignificant in treating cases of pneumonia. The mouth should receive early attention, for a foul tongue promotes indigestion. An antiseptic mouth wash in hot water three or four times daily is always of benefit. The surroundings should be cheerful, with perfect ventilation, as plenty of fresh air will do much to prevent circulatory failure. The tissues can only use a certain amount of oxygen, but that should be furnished from an atmosphere that is pure and unvitiated. Absolute rest in bed from the very beginning is imperative. The patient should not be allowed to raise himself in bed for food or medicine, and the bed pan should be used from the start. The constant annoyance from too frequent sponging, moving, giving food and fussing about the patient is contraindicated. Therefore, a part of any treatment should be to insist on proper intervals of absolute rest of two or three hours, and the giving of food and medicine should be so outlined for the nurse that during the twenty-four hours there should be several periods of absolute rest. Occasional sponging of the skin with warm or tepid water is agreeable to the patient, quiets nervous symptoms and aids elimination. Water for drinking purposes should be supplied freely, and in order to assume vicariously as fully as possible the functions of the incapacitated lung and to prevent the accumulation of toxins the organs of elimination must be kept active. Diuresis is maintained usually by partaking freely of plain or medicated water, but in case the kidneys are not secreting sufficiently the subcutaneous injection or an enema of normal salt solution usually will meet all the requirements, and because of its beneficial effects on the heart is always a valuable measure.

At the outset of the disease the thorough evacuation of the bowels by the administration of broken doses of calomel, followed by one of the salines, is a most important measure, and, while from time to time it may be necessary to repeat this measure to prevent toxemia from intestinal absorption, routine purgation is to be condemned, as it may exhaust the patient.

Digestion is always slow and imperfect in pneumonia, and if food be taken in too large an amount or in any but the most digestible forms it is apt to undergo an abnormal fermentation in the gastrointestinal tract and produce toxins. This adds to the load on the organs of elimination already overburdened in trying to eliminate the toxins peculiar

to pneumonia. The diet, therefore, should be plain, nourishing and easily digestible. Milk, plain or peptonized, should be the chief article of nourishment, as it gives a maximum of nutrition with a minimum of bulk.

In the treatment of pneumonia all manner of topical applications to the chest have been used. Blisters, cupping, leeches, hot and cold poultices, ice packs, cotton and flannel jackets, covered with oiled silk. I am convinced that none of these have the slightest influence on the course of uncomplicated pneumonia, but in cases in which pleurisy is a complication they may be of great value in relieving the pain which accompanies the inflamed pleura. As a rule heat is more agreeable than cold, but there are many exceptions, and the choice between the two may be decided by the patient's comfort. In uncomplicated pneumonia, however, for its psychical effect upon the patient and friends, I believe that a cotton jacket should be applied to the whole trunk, maintaining it in place and covering it with oiled silk, leaving it on during the entire course of the disease, save when an occasional examination of the chest is necessary.

Thompson's experiments to determine the depth to which external application of both hot and cold could be made to modify deep-seated body temperature confirm the opinion that there is little value in such topical applications in uncomplicated pneumonia. W. Gilman Thompson (*The Journal A. M. A.*, March 19, 1904) experimented on several patients who had sinuses resulting from chronic empyema; through these he inserted long-stemmed thermometers for a depth of six or eight inches into the thoracic cavity, then applied poultices as hot as could be borne (in some instances 130 F.), alternating with ice, but in no instance was the temperature of the deeply-seated thermometer affected more than one-eighth of a degree F. The conclusion is justified that, so long as the superficial circulation is maintained, the constantly moving blood conveys away, whether of heat or cold, any external application, thereby preventing a deeply-seated organ, like the lung, which has an independent blood supply, from being influenced. Fever, unless it causes restlessness and remains permanently high, is best left untreated. If it should be persistently high, hydrotherapy is indicated. Ice bags to the head and cold sponging are probably the safest measures. The cold tub bath, because of the handling required, is depressing and often unfavorably influences the pulse and respiration. Chemical antipyretics are to be disparaged, though, of course, they may be used as a specific in complicating conditions, as, for example, quinin in malaria. Occasionally a few doses of some antipyretic will give relief, allaying pain and headache, reducing fever and producing sleep. Continuously administered they are decidedly injurious, and after the second day I do not think it safe to give them at all.

Arterial Sedatives.—Arterial sedatives are much less used than formerly. If used at all, they should be used sparingly and with caution, and only in the initial stages of the most chronic cases. Aconite and



veratrum viride may produce a fatal termination by their toxic effect on the heart muscle.

**Stimulants.**—The use of stimulants in pneumonia requires very careful attention. There are many patients who require no stimulation at all. The practice of giving every patient, suffering from pneumonia, whisky, digitalis or strychnin is a therapeutic outrage. There are times when these patients need stimulants, but the drug to be used and the time to use it should be selected with care.

Anders says: "If the pulse goes over 120, if the first sound becomes weak, if the pulmonary second sound loses its accentuation, or if weakened nervous symptoms appear, then a stimulant is indicated." Alcohol, strychnin, digitalis, nitroglycerin, camphor, suprarenalin, ammonia and normal salt solution are the drugs most commonly depended upon for this purpose. Alcohol as a stimulant has withstood the test of many years, and is regarded by most clinicians as the best remedy with which to combat the cardiac weakness of this disease. It should be used only when the pulse and general condition indicate it. While it is often of the greatest importance, many patients do better without it, but with a feeble dirotic pulse, a dry tongue and a profoundly asthenic condition it is always best to give it. If the patient sleeps after a little whisky, brandy or champagne, or if the pulse becomes less frequent or larger, it has done good. In my own experience I have found that whisky and champagne or brandy and champagne were in many cases much more beneficial than either alone.

Perhaps the most universally used drug as a stimulant in pneumonia is strychnin. Here we have another illustration of a physician using a drug without a clear and perfect understanding of what he is trying to accomplish. Dr. Hare says: "Strychnin is a drug that goads the system to increased endeavor and does not simultaneously aid it. It is the crack of the whip which keeps the team from being mired. Would any sensible driver whip his horses all day, and then whip them all the more when they are stabled?" Strychnin is a drug to be used at the crucial moment, when it is necessary for the system to make one grand effort to pull itself out of a desperate situation. In this disease it is not a drug to be used continuously, although its use may extend over several days. The constant use of this drug puts the system on a "wire edge" and will result in more harm than good. Strychnin should be reserved for the crowded hour, when a sharp, quick attack on the impending depression, by the administration of 1/20 or 1/15 or even 1/10 will call for the patient's best effort to recover.

Caffein and camphor are good and reliable heart stimulants. Strong black coffee is a very efficient means of administering caffein. Camphor is best given hypodermically, dissolved in ether or sterile olive oil in doses of from 1 to 2 grains every two or three hours. Suprarenal extract has been used to some extent as a stimulant with much reported success. I have had no experience with it myself, but I feel quite certain it is not the equal of alcohol, strychnin and normal salt solution.

The beginning of cyanosis calls for practically the same stimulation as that of the heart. The value of oxygen inhalations in this condition is disputed. It is credited by some with striking, though fugitive benefit. By others it is thought that with other respiratory and cardiac stimulants it may carry the patient through the dangerous stage of the disease, and by still others it is condemned altogether. It is true it will not check the disease, and in cases of marked cyanosis it is rarely, if ever, that life is saved by its use, yet in my mind there is no doubt that oxygen is palliative, that it makes the breathing easier, lessens cyanosis, induces sleep, and in this way aids in conserving energy. The trouble is that its use is generally put off too long. It should be commenced at the first signs of cyanosis and given in quantities sufficient to relieve. In severe cases it may be necessary to give it more or less continuously for 8 to 10 hours, in other cases its use for half an hour at a time every two or three hours may be sufficient.

Various drugs have been advocated as specifics in pneumonia—digitalis, serum therapy, salicylates, creosote, quinin, calomel, potassium iodid and a host of others. I feel that it would be a waste of time to take them up individually, believing that none of them have been proved of that specific value so enthusiastically claimed for them by their sponsors.

The therapeutic deduction I wish to draw is that the best treatment of pneumonia, as we know it to-day, is the well-considered hygienic and dietetic management of the case and the careful and intelligent medication of the individual patient as the special symptomatology may indicate.

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## PERFORATING WOUNDS OF THE UTERUS, INFLECTED DURING THE COURSE OF INTRAUTERINE INSTRUMENTATION.

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CHICAGO.

A. General Considerations.—As to nature: as to causes: predisposing; exciting.

B. An analysis of all the cases published in the American, English, French and German literature from 1895-1901, inclusive.\*

C. Conclusions.

### GENERAL CONSIDERATIONS.

Perforations of the uterus can and do occur with the most startling ease. It is difficult to determine the frequency of this accident. Operators, as a rule, are unwilling to give publicity to such an occurrence happening in the course of their intrauterine instrumentations. There is probably no gynecologist in the world of large experience who has not

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\* All the literature to which I had access.

met with this accident, perhaps several times, in his work (Baldwin<sup>1</sup>). In the reports of 3,172 consecutive autopsies held between February, 1898, to February, 1908, at the Cook County Hospital, not one case of perforated uterus is recorded. In all cases of abortion and in all the cases of pregnancy treated at the same institution during the years 1903-1907, inclusive (five years), 495 abortions, 2,343 pregnancies, only three perforations of the uterus occurred; 2 died (autopsy denied); 1, treated expectantly, recovered. By diligently searching the American, English, French and German literature from the year 1895 to 1907, inclusive, I have been able to collect 160 cases of uterine perforation due to perforating wounds, inflicted during the course of intrauterine instrumentation. In Rebreyend's Thèse (Paris, 1901, *Les Plaies perforantes de l'utérus*) will be found some cases not included in our table. They do not in any way confirm our conclusions. So as to more intelligently discuss perforations of the uterus, it is convenient to classify them into true and false perforations.

A. True perforations may be spontaneous; that is, they may occur without the aid of violence; may be secondary or consecutive; that is, they may follow an insult to the uterine tissues, be that insult chemical, thermic, bacterial, or traumatic in nature.<sup>2 a, b</sup> The perforation may follow immediately, or only become established after an interval of time. All uterine perforations due to perforating wounds are true perforations.

B. False, or pseudouterine perforations are not perforations in fact.<sup>3 a, b, c, d</sup> We will briefly discuss these pseudoperforations, and then eliminate them from further consideration in this paper. They have caused diagnostic errors, followed by such operative mistakes, as needless laparotomies, as unfortunate removal of intact uteri. The term pseudoperforation is used to designate a condition capable of conveying to the operator the impression that he has perforated the uterine wall, when in fact this mishap has not occurred. What, then, has occurred?

1. The uterine sound or other instrument may have slipped into a double uterus (uterus didelphys).<sup>4</sup> It may have entered a uterus unicornis.

2. The instrument may have slipped into the dilated uterine end of a Fallopian tube,<sup>5 a, b, c, d, e</sup> very rare, or into the more developed horn of a bicornute uterus. Watkins,<sup>5 b</sup> after opening the abdomen, found that what he had diagnosed as the passage of the curette into the peritoneal cavity was the passage of the curette into the Fallopian tube. In Hind's case<sup>5 c</sup> the uterine sound was introduced into the uterus before incising the abdominal wall; after opening the abdominal cavity, it was seen that the sound had threaded the whole length of the Fallopian tube. It was presenting at the abdominal orifice of the tube. In Floeckinger's case<sup>5 a</sup> laparotomy showed that the uterine sound was in the oviduct. In Thorn's case<sup>5 d</sup> one uterus was myomatous, the other lateroflexed and lateroverted. In the case of myoma of the uterus, the uterine sound was introduced 14 cm., suddenly there was a lack of resistance, hasty removal of the sound. On opening the abdomen it was seen that the sound had penetrated a

distance of 3 cm. into the Fallopian tube. Ahlfeld<sup>5e</sup> also reports a case in which, after laparotomy, it was seen that the left oviduct had been entered by a sound, introduced into the uterus. Nevertheless, this occurrence—the introduction, by way of the uterus, of any instrument into the Fallopian tubes—is very infrequent, so infrequent that its possibility has been denied by competent observers, because:

1. Under natural conditions, the lumen of the uterine end of the oviduct is so small that it is only with difficulty that one can introduce a bristle into it.

2. Under normal conditions, the broad ligaments and also the ovarian ligaments maintain the Fallopian tubes in a transverse position in the pelvis.

Lawson Tait was never able on the eadaver to sound the tubes through the uterus. He maintains that under normal conditions, it is impossible to introduce by way of the uterine canal an instrument into the normal Fallopian tubes. Catheterization of the tubes is more liable to occur in the presence of such pathological conditions, as uterine lateroversions and lateroflexions, after interstitial gravidity, after hematometra, etc.

3. The instrument may have slipped into a small cavity, which has developed in the interior of a uterine fibromyoma.

4. The sudden ballooning or relaxation<sup>3a, b, c</sup> of the uterus may also convey to the operator the impression that he has perforated the uterine wall. There is such a condition as atony of the uterus. The fact that at all periods of sexual life the uterus has the property of alternate contractions and relaxations, is regarded as proved by all physiologists. Contraction and relaxation are properties inherent to all muscular tissue, and the uterine muscularis is not an exception to the general rule. Keiffer's experiments, bimanual examinations, etc., point to a more or less periodic variation in the tone of the myometrium.

During curettage one often notices a uterine lengthening of 1, 2 or 3 cm. It is no longer claimed, just because the curette in these cases is not kept in constant contact with the uterine wall, that these uterine lengthenings are instances of perforations of the uterus. They are evidences of uterine relaxation. The system of uterine blood vessels is adapted to expansions and contractions. R. de Bovis,<sup>3a</sup> in *La Semaine Médicale*, Paris, 1906, vol. xxvi, p. 253, has an excellent and exhaustive article on pseudoperforations of the uterus.

Though this condition, pseudoperforation, is infrequent, its existence can no longer be denied. In Craig's case<sup>6</sup> the operator, supposing that he had perforated the uterus, opened the abdomen; he then found the uterus to be uninjured absolutely. In the case reported by N. Gheorghiu<sup>7</sup> the removed uterus showed no trace of perforation. Kossman<sup>3b</sup> bears witness to similar facts.

Perforating wounds of the uterus, especially of the pregnant uterus, can be inflicted from above,<sup>8</sup> can occur during the course of a laparotomy, can be associated with penetrating wounds (gunshot wounds, stab wounds and similar injuries) of the abdominal wall, of the gluteal<sup>9</sup> and other regions; can occur during the course of delivery. Wounds so in-



reports a case in which, after laparotomy, it was seen that the left oviduct had been entered by a sound, introduced into the uterus. Nevertheless, this occurrence—the introduction, by way of the uterus, of any instrument into the Fallopian tubes—is very infrequent, so infrequent that its possibility has been denied by competent observers, because:

We will consider in this article only such perforating wounds of the uterus as are due to violence, inflicted from within the uterine canal; that is, only those perforating wounds in which the vulnerating agent has either been introduced through, or has traversed the uterine cervical canal, before perforating the uterine wall. The element of trauma is essential, is indispensable to the accurate conception of these perforations.

In the course of intrauterine instrumentation, diseased and healthy uteri<sup>10 a, b, c, d, e, f</sup> have been perforated and most disastrous results have ensued. Wounds of the uterus, like wounds of other organs or tissues, are solutions of continuity of tissue. They are always of sudden occurrence and are always due to the direct application of mechanical violence. To avoid misunderstandings a distinction must be made between penetrating and perforating wounds of the uterus. The former only enter the uterine wall; the latter traverse its entire thickness. Therefore, the distinctive characteristic of perforating wounds of the uterus is, that they involve the entire thickness of the uterine wall. All the coats, or rather layers, of the wall of the uterus are interested, the mucosa, the muscularis and the serosa (in those portions of the uterus that are covered by the peritoneum).

The uterine perforations discussed in this article were always consecutive to some intrauterine maneuver and always immediately so. In this class of uterine wounds, the vulnerating agent establishes a direct communication between the uterine and some adjacent cavity; the peritoneal cavity<sup>11</sup> almost always; rarely the vaginal<sup>12 a, b, c</sup> or the vesical cavity;<sup>13 a</sup> still more infrequently, the lumen of the gut. In other cases, the perforating instrument, after having pierced completely through a portion of the uterine wall not covered with peritoneum, enters the peri-uterine connective tissues, penetrating between the folds of the broad ligaments (parametrium) (14, cases a, b, c). If the violence still continues to act, the vulnerating instrument may perforate one or both layers of this ligament and thereby also enter the peritoneal cavity (15, cases a, b). The perforating instrument may enter the vesico-uterine space (16, case a), may enter and lodge in the space of Retzius (17, case a), may enter and lodge in the Douglas cul-de-sac (18, case a). Traumatic perforation can involve any portion of the uterine wall. In my two cases (19) the perforation, as is usual, is almost always the case, involved the posterior wall; in Van Ripper's case (11) the rent was in the anterior wall; it extended from the fundus uteri to near the vaginal vault. In Harris and Whitney's case (20) the anterior wall showed a transverse rent about one and one-half inches in length. In Case 21 the uterus was perforated from horn to horn and the perforation was filled with omentum. In Case 14 b the perforation was situated at the anterior and left

lateral surfaces of the supravaginal portion of the cervix. In case 22 the perforation was also in the anterior wall. The perforation may be in the cervix uteri, as cases (12, a, b, c; 23); may be in the corpus uteri, or may involve both; may be single, may be multiple (they are most usually single); may be small, may be large, as in case (24) in which the midwife produced a uterine rent 20 cm. long.

In Ullmann's case (25) there were two perforations. In Schenk's case (26) there were three. In Werelius' case (27) the uterus contained seven punctures. The perforation may be barely visible; in one of my cases merely a subperitoneal ecchymosis was present; may be large enough to permit the escape of a large portion of the omentum and of intestines through the rent, as in Hessert's case (28), in which four feet of gut had been pulled through the uterine rent; as in Holmes' case (29) in which intestines were found between the woman's legs; as in Congdon's case (30) in which the operator after pulling 40½ cm. of intestine into the vagina, twisted them off. In Case 31 the operator kept on pulling intestines until he had drawn out six feet of bowel, which he cut off. This case terminated fatally. All the other cases mentioned above recovered. The perforation may be large enough to allow the escape of the fetal head into the abdominal cavity, Case 32: it may be large enough to allow the escape of the fetus into the peritoneal cavity, as in Whitney's case (20). In Tait's case (33), nine months after the date of infliction of the perforation, the tract of the curette could still be seen. The size and shape of the opening are to some extent dependent upon the size and the shape of the vulnerating instrument.

The perforation may lead to the formation of permanent abnormal channels of communication between the uterine and an adjacent cavity, as in Dr. Lobdell's case (13), in which the perforation of the uterus took place directly into the bladder and a permanent vesico-uterine fistula resulted; may lead to the permanent prolapse of a portion of the omentum into the uterine cavity (cases 31, a, b). Usually after the infliction of the injury the vulnerating agent is removed. In some of the reported cases, exceptional cases I admit, it was abandoned in place and was either expelled per vaginam or eliminated by the aid of a slowly ulcerative, suppurative or other pathological process through newly created avenues. The perforating body may be eliminated through the rupture of a near or a distant abscess, or may be removed at operation (cases 14 a, 35): or at autopsy (case 36). In one of Treub's cases (17) the bougie was embedded in a retro-uterine abscess. In his other case (17) he removed by an incision the perforating catheter from the space of Retzius. In Johnson's case (37) the patient was laparotomized and the bougie, cause of the perforation, was found to be almost entirely folded in and covered by the omentum, an evidence of the effort of Nature to repair the damage and to prevent injury of the abdominal viscera. In Thorn's case (18) the perforating bougie, after the patient had been laparotomized, was found lying obliquely in Douglas' cul-de-sac. In Talmey's case (10, f) the perforating bougie was found lying in front of the proximal edge of the right kidney. In Bullard's case (38) the crochet hook was discharged

through the anterior abdominal wall. It did not interfere with the continuance of gestation. In Perl's case (24) the needle or trocar that had perforated the uterus was removed some time after from an abscess in the right inguinal region, where it had become encysted after its passage through the uterine wall. In Fairchild's case (39) at the laparotomy the hairpin was found high up in the abdominal cavity near the diaphragm. In Patru's case (14 a) the perforating catheter was found embedded in an abscess palpable through the anterior rectal wall. By means of an incision made in the anterior rectal wall all the pus was evacuated and the bougie removed. In Marchand's case (40) a Hegar's metallic dilating bougie, No. 12, perforated the uterus and was abandoned in the patient's body. After about a year of invalidism she was laparotomized and the sound was found between two folds of mesentery. It was removed; recovery ensued.

Any instrument that can be used or misused in the uterine cavity is capable of perforating the uterine wall. All forms of uterine sounds, of uterine dilators, of curettes—the St. Cyr auger (41, a, b) curette included—can be incriminated. In the case of 41 b thirty-one inches of gut had been torn away by the auger curette. In the cases reported during the last ten years it is stated in unmistakable terms that the vulnerating instrument was:

1. Uterine douche tube, irrigator, catheter, 12 cases.
2. Uterine bougie, uterine sound, 17 cases.
3. Uterine dilators, 31 cases.
4. Uterine curette, 44 cases.
5. Miscellaneous agents, 50 cases.

In other cases the offending agent is either not stated or happened to be either a probe (case 38), a wire (case 39), a meat skewer (case 15. b), an electrode (case 18).

Perforating wounds of the uterus are always of accidental occurrence. Nowadays they are never intentionally inflicted. They have occurred in the hands of the most dextrous, of the most clever operators. The accident has occurred to Lawson Tait (case 33), Auvard (Paris) (case 42) had one perforation in 270 uterine curettements. It can not be stated that they are always due to ignorance, to incompetence, to carelessness; but it can be said that in the hands of the novice, in the hands of the careless, in the hands of the surgically unclean, all intra-uterine instrumentations are dangerous. It can also be stated that in most of the cases in which death has followed upon uterine perforation the perforating instrument had been introduced for criminal purposes. In 26 of the cases analyzed in the preparation of this article the perforating instrument was introduced to end an undesired pregnancy. In some of the fatal cases where the perforating instrument was not introduced for criminal purposes it has been guided by unclean hands.

In 1873 L. E. Dupuy (43) said: "I have found reported 17 cases in which the uterine wall has been perforated from within. In some of these cases the uterus had been perforated at more than one point. All

these patients made uneventful recoveries. In none were any measures taken either before or after the accident to prevent the development of complications."

In 1878 Carlo Liebman (44), in reporting two cases of uterine perforations, treated expectantly and terminating in recovery, reviewed the subject quite exhaustively. In his article Liebman makes the following statement: "In not one of the cases reported in the medical literature, and they exceed thirty in number, was the perforation of the uterine wall followed by alarming symptoms."

Liebman compares the accident to paracentesis, to exploratory punctures of organs, procedures which are generally considered harmless. Lenoir (45) says: "These perforations have proved interesting to us, not only on account of their frequency, but also on account of their innocuousness."

Lawson Tait (33) has never seen any ill results follow perforation of the uterus by a uterine sound. In not one of the reported cases in which the perforating instrument was a sound did death occur. The sound is a much less dangerous instrument than the curette. It makes a smooth hole while that made by the curette is apt to be ragged.

The aforementioned authors concluded from their study of the literature and from their personal experience that perforated wounds of the uterus are relatively benign, are unattended with danger. Their opinion is erroneous and is completely disproved by the study of the literature of the subject published during the last twelve years.

The dangers of perforating wounds of the uterus are manifold. Independent of the danger of shock, there is the danger of hemorrhage into the pelvic and general peritoneal cavities, into the pelvic connective tissues; of injuries to the peritoneum; of injuries to the intra-abdominal organs, etc. In 23 of the fatal cases it is definitely stated that a diffuse suppurative peritonitis was present. There is the danger of traumatizing the omentum, of traumatizing the intestines. In 35 cases it is stated that positive injury was inflicted to the intestines or to the omentum. Any of these dangers can prove fatal. In Donald McCrae's case (10; b) the patient bled to death. She died three hours after the infliction of the perforation. The uterus in this case showed practically no pathology. Several months before patient had had a miscarriage. At the time of the perforation twenty-eight inches of intestines were pulled out through the perforation and twisted off by actual force. Shock, hemorrhage, visceral injuries and infection may be associated in the same individual case. If a larger tear has been made in the uterus there is danger of a loop of intestine or of a part of the omentum slipping into the rent and becoming strangulated (cases 11, 20). The gut may only be incarcerated, not strangulated, in the rent (case 46). In Kustner's cases (34, a and b) the omentum escaped into the uterine cavity. Following these two (Kustner's) unrecognized cases, prolonged and irregular uterine bleeding occurred. Eventually vaginal hysterectomy was done in both cases, and on section each uterus was found to contain grape-like pieces of omentum. The omentum may plug the uterine perforation (21, 47). In cases of



perforation of the posterior wall of the uterus near the fundus, if the omentum hangs low into the pelvic cavity, it is very liable to become entangled in the curette and drawn through the perforation into the uterine cavity, even into the vagina. If the patient recovers from the perforation the site of the cicatrix apparently does not interfere with the subsequent development of pregnancy, as evidenced by Cases 22, 27, 28, 47, 48, 49, 50. In one case (27), though the uterus had been perforated at seven different places, patient subsequently became pregnant and was delivered of a living child. In one case (47) the site of perforation was sought at the time of delivery in a subsequent pregnancy. No trace of it could be found. Hönck's case (51) is the only case reported in which the perforation is said to have enlarged at a subsequent pregnancy and to have complicated delivery.

How can the frequency of these perforations be lessened? How can the morbidity and the mortality incident to their occurrence be lessened?

A. By the non-employment of inappropriate or defective instruments.

B. By never entering the uterine cavity in the absence of indications.

C. By never entering the cavity of the uterus in the presence of contraindications, such as pus in the Fallopian tubes, the ovaries or around the uterus; in acute gonorrheal endometritis; in acute septic endometritis, etc. The existence of an extra-uterine pregnancy contraindicates uterine curettage.

D. By perfecting our surgical technic.

E. By familiarizing ourselves with the conditions that predispose to the occurrence of uterine perforation. For instance, in removing pedunculated uterine submucous fibroids the peritoneal cavity is liable to be opened, as in Cases 46 and 52 a and b.

In a few words, by keeping in mind in connection with intra-uterine work, that there are: Dangerous instruments, dangerous uteri, dangerous maneuvers.

The use of placental forceps in the uterus by inexperienced hands is always dangerous. It is needless, as the finger can do more effective work. Even the finger has difficulty at times in differentiating between placental tissue, blood clot and intestines. The uterine sound or hystrometer is an instrument of very little usefulness. In most cases the size, mobility and position of the uterus can be better and more safely determined by bimanual vagino-abdominal examination. Laminaria tents should be always as long as the uterus; otherwise the lower end of the laminaria, instead of projecting a little below the external os, is liable to slip into the uterine cavity. Should, then, the long axis of the laminaria not remain exactly in that of the uterine cavity, the lower end of the tent becomes impinged against the uterine wall. The uterine contractions may drive that end partly or entirely through the uterine wall. The use of laminaria tents produces a more gradual dilatation of the cervical canal. This is an advantage which, in our opinion, is counterbalanced by the fact that the patient has sixteen to twenty-four hours of pain. We believe that the tupelo tents can with advantage be banished from the gynecologist's

armamentarium. The danger of infection from the use of tents is great (Dudley, Chicago; Kelly, Baltimore).

The three-bladed steel dilator is considered dangerous. It has been nicknamed "the perforating dilator" (case 53). Its use is to be discouraged. Hegar's graduated metallic dilating bougies are serviceable. Their function is to dilate the cavity of the cervix uteri, not that of the corpus uteri. It would be advisable that they be marked off in centimeters so that the operator would know at all times how deeply they are introduced. Whenever the fundus uteri is perforated by a Hegar dilator the operator is to blame.

As to uterine curettes, there does not seem to be any pattern which can not, suitable conditions being present, determine a perforation of the uterus. The blunt and the sharp, the fenestrated and the non-fenestrated, the even margined and the sinuous margined curettes are each reported as having perforated the uterine wall. It is better to use a curette, the shank of which may be bent like a probe, so as to be made to conform to the direction of the uterine canal. A curette which is pliable and curved and broad above is less liable to cause perforation than one which has a narrow upper end and which is rigid and straight. Some models of fenestrated curettes are very apt to catch muscular tissue.

The introduction of the finger or of instruments in the uterine cavity should not be regarded lightly. With but few exceptions, all these perforations have occurred during the operation of dilatation of the cervical canal or during that of curettement of the uterine cavity. These two operations, cervical dilatation and uterine curettage, when performed with due precautions as to asepsis, as to preoperative preparations of the patient, such as emptying of the lower bowel and catheterization of the urinary bladder, are relatively of great simplicity of technic, of great benignancy and of great efficiency. Following their performance, judicious after-treatment is of great importance and should not be overlooked. These two operations should not be performed indiscriminately; should not be performed in the absence of positive indications. They are better performed with the aid of an assistant.

The indications for dilatation of the cervical canal are:

1. As a preliminary measure to (a) intra-uterine explorations, (b) uterine curettage and other intra-uterine maneuvers.
2. As a therapeutic measure in dysmenorrhea.

Dilatation or divulsion alone is not to be considered a specific for dysmenorrhea. A considerable number of cases of dysmenorrhea are not in the slightest degree benefited by this operative procedure. In the marked dysmenorrhea, at times associated with uterine ante flexion, Dudley's operation will be found very serviceable. In dysmenorrhea, due to stenosis of the external os, Pozzi's operation is valuable. Dilatation alone is valueless in the treatment of dysmenorrhea due to any of the various malpositions of the uterus. We must treat the cause or the causes which determine the occurrence of the symptom: dysmenorrhea.

The indications for uterine curettage are:

1. To remove placental débris, etc. In this connection let us state that in the opinion of such men as Coe, Pinard, etc., the aseptic finger is the best instrument to introduce into the puerperal uterus for the purpose of removing decidual remnants and blood clots. Pinard, for the postabortum or postpartum removal of placental débris, rejects the use of the curette and teaches that in all cases of retained secundines the finger should be employed. He considers it safer and more thorough. There are limits, however, to the power of the human digits, and at times the curette will be found a valuable auxiliary to the finger. For the exploration of the uterine cavity, the finger, by virtue of its tactile sensibility, is far superior to any instrument. The curette is a blind agent (Le Page, Pinard, Budin).

2. As an aid to diagnosis in decidual endometritis, uterine tuberculosis, carcinoma, chorion-epithelioma and other intra-uterine neoplastic or inflammatory processes, the use of the curette as a diagnostic aid is a recognized and sanctioned procedure. When carcinoma of the corpus uteri is suspected the curette must be used with great precaution and only to remove small pieces for diagnosis. Again in those cases where curettage has been previously performed, great care, great gentleness, is necessary because it sometimes happens that the uterine wall has been previously too deeply scraped and then the danger of perforating this organ is imminent (54, 55, a, b).

3. To remove abnormal endometrium, causing dysmenorrhea and sterility; to induce involution of the uterus. As to whether it is wise to curette an empty septic uterus following on labor or abortion clinicians differ. Naturally if the uterus contains retained placental tissue this must be removed. If the curette is used, venous sinuses and lymphatic channels are opened and the protecting barrier of leucocytes is interfered with and possibly removed in places. Further, the Fallopian tube may thus also become infected.

4. To remove the remains of a mole pregnancy.

5. In the treatment of inoperable carcinoma of the cervix. In this condition septic absorption is one of the common causes of immediate distress; curetting the fungating mass and subsequent treatment of the raw surfaces with strong formalin frequently does away with sepsis, hemorrhage and pain.

C. What are some of the contraindications to utero-cervical dilatation or to uterine curettage? a. The absence of a positive indication. b. The presence of a suppurative process, either in the uterus, in the uterine adnexæ, in the parametrium, or in any other pelvic organ or structure. c. The presence of such conditions as phlegmasia alba dolens, of uterine or peri-uterine thrombophlebitis. The curette is liable to disturb the thrombi in the uterine veins, at the placental site or in the plexus pampiniformis (Byron Robinson).<sup>56</sup>

D. By perfecting our surgical technic, the occurrence of this accident, perforation of the uterus, will become a rarity. Before undertaking any intra-uterine maneuver, determine: a. By vaginal examination. b, By bimanual, vagino-abdominal examination:

1. The presence or absence of adnexal or periadnexal disease. Curettement has determined the rupture of tubal, peritubal, ovarian, peri-ovarian and peri-uterine pus collections. Even the pulling down of the cervix by tenacula has ruptured pus collections.

2. The size, the shape, the mobility and the consistency of the uterus. If the uterus be bound down or immobile as a result of adhesions due to previous pelvic inflammatory processes, it is far more liable to be perforated. Under such conditions it does not yield to the impact of the uterine instrument, it does not accommodate itself to the pressure exerted by the sound, curette, etc.

3. The presence or absence of tumors upon or within the uterus.

4. Some operators further recommend that the depth and the direction of the uterine cavity be determined by the careful use of the graduated uterine sound or by the hystrometer and that any deviation from the normal be noted. The use of the uterine sound as means of ascertaining the depth and direction of the uterine cavity is condemned by most operators. They rightly claim that the same information can be more safely determined by bimanual vagino-abdominal examination. In Case 57a the uterus was anteфлекed; in Cases 12c, 57b and 58 a, b, it was retroфлекed. In Case 59 it was retroverted; in Case 45 it was anteverted; in Case 60 laterofлекed. All malpositions, congenital or acquired, of the uterus, if unrecognized, predispose to perforation during the course of intra-uterine maneuvers. Malposed uteri are most frequently perforated opposite the point of angulation. The nutrition of the uterine tissues being impaired at the point of flexure explains the not uncommon occurrence of perforation also at this point. In the retroфлекed uterus it is the anterior wall which is the more liable to be perforated; in an anteфлекed uterus the posterior wall.

5. Get a mental picture, as clear as possible, of the pelvic organs. Having a definite mind picture of the pelvic conditions existing in the individual case, if uterine perforation occurs it is more immediately recognized and one desists from further intra-uterine instrumentation. For instance, suppose that in a given case the uterus has by examination been determined to be normal in size, in volume and in position, and that during the introduction of the uterine instrument the latter slips much to one side of the median line and to a depth greater than that of the uterine cavity, perforation will then immediately be diagnosed.

6. Observe the most rigid asepsis during the course of the operation and see that from the standpoint of asepsis and antisepsis the patient has been prepared as carefully as though you were going to perform a laparotomy. A complication, necessitating a laparotomy, may suddenly arise during the course of intra-uterine maneuvers. In uterine wounds, be they inflicted by the sound, by the uterine dilator, or by the curette, you must minimize, you must avoid the liability of implantation of infection. Not much can be done to cure existing infection. Much can be done to prevent the occurrence of infection. The endometrium sits directly on the myometrium without an intervening submucosa to check endometrial infectious invasion.



Chief among the pathological states that predispose to the occurrence of perforating wounds of the uterus are the following:

a. The changes (hyperemia, softening, etc.) present in menstruating, in pregnant, in puerperal and in postabortum uteri. Perforation is favored by the peculiar state of the muscular tissue of the puerperal uterus. In curetting congested, softened uteri, such as are met after abortion and after childbirth, no attempt should be made to elicit the uterine "cry" (*le cri uterin*) (case 61); that is, the peculiar creaking noise due to the forcible scraping of the uterine wall by the curette. In these cases, owing to the softness and friability of the uterine wall, this sound is not obtainable.

b. Atrophy of the uterus (63). All the different forms of uterine atrophy of themselves cause a weakening of the uterine wall and, therefore, can be looked upon as conditions predisposing to uterine perforation. Atrophy of the uterus has been observed in some chronic diseases, as in pulmonary tuberculosis, occasionally in diabetes, in leukemia, in chlorosis, in pernicious anemia, in Addison's disease, in Basedow's disease, etc. It is stated also that in certain acute infectious diseases, such as typhoid fever, a marked atrophy of the muscular tissues is noted.\*

We will enumerate the main histo-anatomical changes that have been noticed in senile atrophy of the uterus and those found by Emil Ries (Chicago) in some cases of marked atrophy following puerperal infection.

The changes found in senile uteri are: a. Atrophy of the mucosa and of the muscle fibers. b. The relation in amount normally existing between the connective tissue and the muscular tissue is altered considerably at the expense of the latter. c. Vessels are sclerosed. Case 33 was a senile uterus. It was also the seat of myomata.

Emil Ries, Chicago, in some cases of extensive atrophy of the uterus following puerperal infection, found: a. Absence of mucosa. b. Hyaline degeneration and thrombosis of the vessels. c. Degeneration and necrosis of the muscularis.

Malignant neoplastic diseases of the uterus are numerous. The cases of carcinoma or sarcoma of the uterus, in which perforation of the uterus has resulted from slight mechanical stress, are numerous. Efforts in the presence of malignant disease of the uterus to obtain material for microscopical examination, if brutal, may prove disastrous. Malignant disease of the uterus may give rise to spontaneous perforations (65).

Inflammatory processes in the uterine tissues may be localized; may be diffuse. Like inflammatory processes elsewhere, they are destructive in nature. Whatever be the nature of the inflammation, acute or chronic, or the site, be it located in the mucosa, in the muscularis or in the connective tissue, it invariably weakens the resistance of the uterine wall. Case 66 was a case of myometritis edematosa; Case 67 a case of endometritis fungosa. In Case 68 sutures from a previous operation were suppurating their way through the uterine wall. Prolonged septic proc-

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\* There are other unusual pathological states of the muscular uterine wall that predispose to perforation, such as, for instance, existed in Halban's case (64) and in others. Lack of space forbids us to discuss them here.

esses predispose to uterine perforation. Tubercular uterine inflammation by leading to abscess, to cavity formation, can of itself cause uterine perforation.

Inflammation of the uterus may terminate in resolution, in ulceration, in suppuration or in gangrene. We will briefly consider abscess (69, a, b, c) of the uterus and also gangrene of this organ, as several instances will be found in our tables where these conditions, either together or separately, were present. The occurrence of abscess of the uterus is no longer contested, as many of the cases reported have been amply verified (70, a, b, c). Uterine abscesses may be acute, subacute or chronic; may be primary or secondary. In the primary form the pus collection has its starting point as such in the uterine tissues; in the secondary form the suppurative process starts in neighboring tissues and invades the uterus by extension through contiguity of tissues. In the first form, at the beginning, if not throughout its entire course, the pus collection is entirely circumscribed by uterine tissue; in the secondary form it is partly surrounded by the uterine tissue, partly by other tissues.

In number these abscesses may be single, may be multiple. In location they are either submucous, intramuscular or interstitial or subperitoneal. Their site may be in the anterior wall (70, c), may be in the posterior wall (70, b). Uterine abscesses are always due to infection: a pathological surgical or traumatic solution of surface continuity of the uterine mucosa serving most frequently as the portal of infection. Any pyogenic organism, facultatively or habitually so, can be the causative germ. Tubercular abscesses have been reported. In Menge's case (69, b) gonococci were detected in the pus. Nevertheless, the ordinary pyogenic cocci are the most frequent offenders. The germs are either implanted in the uterine tissues by a vulnerating instrument or may be conveyed to the site of abscess development by the lymphatic vessels. Rarely the abscess is embolic. The abscess may be secondary, by continuity of tissues, to an infective uterine thrombophlebitis (infective thrombophlebitis, suppurative peri-thrombophlebitis, abscess). The liability to the latter (septic thrombophlebitis) occurrence during postabortion period is well known.

All uterine abscesses impair the solidity of the uterine wall. They predispose to traumatic perforations, as the abscess site forms a circumscribed area of lessened resistance. They may rupture spontaneously into the rectum (Bird's case, Schroeder's case); into the bladder (Berrut's); into the uterine cavity; into the peritoneal cavity, etc. They may give rise to spontaneous perforation, as when the abscess ruptures both into the uterine cavity and into an adjacent cavity or space. We have in the case reported by Porak (70, a) an instance of spontaneous uterine perforation due to an abscess. This was a case of puerperal sepsis. The uterus contained several abscesses, one of which had ruptured both into the uterine and into the peritoneal cavities. In one of Mauclair's cases (71) at the seat of perforation there was an abscess which extended nearly to the peritoneal coat.

Another possible termination of uterine inflammation which predisposes to perforation is gangrene. Uterine gangrene may be circumscribed, may be general; may involve the entire thickness of the uterine wall, may only involve a part of its thickness; may be due to traumatic, inflammatory, neoplastic or to chemical causes. It may be secondary to criminal or other intra-uterine maneuvers; it may be spontaneous. Gottschalk (72) reports a case of gangrene of the uterus (puerperal sepsis) in which the necrotic tissue represented the whole uterine mucous membrane and a portion of the muscular walls. He thinks that in this case the gangrene was due to intra-uterine injections of 60 per cent. alcohol. Cases of gangrene, due to contact of caustics with the uterine wall, are reported. Gangrenous metritis is a condition which predisposes to traumatic uterine perforation, which may result in spontaneous perforation. Beckman, of St. Petersburg, noted this grave complication six times in forty cases of metritis denticans. Metritis denticans is the condition which we now designate as gangrenæ uteri puerperalis. It may be partial, it may be total, it may be perforating.

On examining the removed uterus it is at times difficult to determine if the perforation is secondary to the gangrene, or if the gangrene is secondary to an inflammation started by an instrument which has penetrated the uterine wall (73). In Winter's case (74) the gangrene was secondary to a perforation. It was located on the posterior wall; there was a marked predominance of saprophytic germs. The inflammatory gangrene enlarges the traumatic lesion and may lead one to think that the perforation is spontaneous in origin. Magrier (75) reports two cases of postabortum gangrene. Each had led to a uterine perforation. Trauma as a factor was absent in both. K. Schmidlechner (76) reports a case of gangrene uteri puerperalis involving the entire cervical wall and the lower one-half of the muscular wall of the body of the uterus. In removal of the uterus the cervix was perforated.

#### CONCLUSIONS.

1. Pseudo perforation of the uterus, though of exceptional occurrence, is a condition that occasionally confronts the surgeon.

2. Spontaneous perforations of the uterus, due to pre-existing pathological conditions of this organ, can and do occur.

3. Perforating wounds of the uterus, be they intra-peritoneal, extra-peritoneal, have a morbidity, have a mortality. This morbidity, this mortality, increases in direct ratio with the inexperience, the carelessness, the surgical ignorance and the surgical uncleanness of the operator. The expert recognizes at once the making of a false passage and institutes proper treatment. High surgical skill may convert (as a consultation of the articles enumerated at the close of this article amply demonstrates) an apparently hopeless case into a recovery. In the 154 reported cases there were 42 deaths, 108 recoveries. The result is not stated in 4 cases. Expectant treatment was pursued in 66 cases. There were 21 deaths in this series. Laparotomy, including what intra-abdominal repair work appeared necessary to the operator, was performed 72 times. There were 52

recoveries, 17 deaths and 3 unstated results in this series. Vaginal hysterectomy was done 15 times. There resulted 10 recoveries, 4 deaths and 1 result not stated.

4. Dilatation of the cervical canal and instrumental curettage of the uterine cavity are, owing to their associated dangers, not office operations. During the performance of either of these two apparently danger-free operations the operator may be confronted by accidents, the meeting of which requires the highest surgical skill. In their performance, if an anesthetist be available, the employment of general anesthesia (in the absence of contraindications) is highly desirable; in fact, the rule should be

a. No uterine curettage without general surgical anesthesia. It is easy to conceive how an unanesthetized patient can, by injudicious jerks or movements, perforate her own uterus by impaling it, by spiking it upon the intra-uterine instrument. Anesthesia permits the operator to depress the abdominal wall, to locate, to fix if necessary the fundus uteri.

b. No curettage without ample cervical dilatation. A non-dilated cervical canal interferes with the tactile sense and thereby with the proper maneuvering of intra-uterine instruments. Steady the cervix before beginning the dilatation of the canal.

5. Intra-uterine instrumental maneuvers should only be attempted by those:

a. Who are thoroughly conversant with modern surgical asepsis and antisepsis. The absence of bacteria on the perforating instrument minimizes very much the dangers of perforation. Infection has immediate, has late dangers. In an uncomplicated perforating wound of the uterus the traumatism of the uterus play but a secondary rôle; the pre-existence or the implantation at the time of perforation or subsequently of infection commands the situation.

b. Who are capable of recognizing malpositions of the uterus as well as pathological conditions of that and of neighboring organs. Even the bringing of the cervix to the vulvar outlet may disturb peritoneal adhesions, may rupture pus pockets.

c. Who are acquainted with the treatment of the dangers incident to the successive steps of the intra-uterine operation which they are performing. The steel dilator is an instrument of too much power, and the curette is too dangerous a weapon to be used by the novice, by the inexperienced.

6. Once the uterus has been perforated all further intra-uterine instrumentation must be suspended. If it be imperative that the contents of the uterine cavity be removed, this must be done by digital curettage, or it may be done with a curette, whilst the uterus is being watched from above, through a laparotomy incision.

7. A perforated uterus should never be mopped or swabbed with caustics or irritating antiseptics. It is needless, it is dangerous. In two cases (38, 77) it is distinctly stated that the uterine cavity was swabbed. Both cases died. In each carbolic acid was used.



8. A perforated uterus should never be irrigated. In 17 cases in which it is stated that the uterus was irrigated during the course of perforation or afterward there were 6 recoveries (cases 17, 49, 57, 78, 79) and 11 deaths (22, 63, 47, 80, 81, 83). In two of the recoveries (Cases 39, 57) convalescence was delayed by mercurial poisoning, due to the sublimate solution that had been used for uterine irrigation. In Case 78 one ounce of 1 per cent. aqueous solution of creolin entered the peritoneal cavity. Brothers in his report of Case 22, in which the perforated uterus was irrigated, states, "I have never seen a case of greater physical suffering in my life." The great danger attending intra-uterine irrigation in these cases is the conveyance, the diffusion by the irrigating fluid, of septic material from the uterine into the peritoneal cavity or other space. Owing to the great absorptive power of the peritoneum the danger of chemical intoxication is also present. Every case in which it is definitely stated that the perforated uterus was not irrigated recovered; 10a, 12c, 19, 22, 29, 31, 33, 47, 67, 71, 85, 86a.

9. Vaginal hysterectomy is an operation not to be performed in the treatment of perforating wounds of the uterus. It calls:

- a. For the sacrifice of an organ which may not be perforated.
- b. For the sacrifice of an organ which, though perforated, most always can, with little difficulty to the operator and with much advantage to the patient, be saved.
- c. It does not enable the operator to either exactly determine the presence or absence of other co-existing intra-abdominal vascular or other lesions, nor does it not enable him to repair them.

10. If the perforated wound has been inflicted upon a non-septic uterus during the course of an aseptic intra-uterine maneuver, in the absence of complicating abdominal lesions, recovery is the rule.

11. The treatment of perforating wounds of the uterus is determined largely by the following conditions:

- a. The septicity or asepticity of the uterus and of its contents.
- b. The septicity or asepticity of the perforating instrument.
- c. The presence or absence of co-existing vascular, omental or intestinal lesions.
- d. The size and the number of the perforations. A piece of omentum may prolapse through a large rent. A coil of gut may become incarcerated or strangulated in a large perforation.

12. Treatment:

a. If the uterus be non-septic, if the perforating instrument be aseptic and if it can also be reasonably assumed that there is an absence of omental or intestinal or important vascular lesions, the treatment to be followed is one of "armed expectancy." The patient must be confined to bed and immobilization enjoined for at least three days. The patient's pulse, temperature, facies and abdomen must be carefully watched. A suppurative peritonitis, circumscribed or diffused, a suppurative cellulitis, signs of internal hemorrhage, etc., call for intervention. A wick of gauze may be inserted into the uterus, but it should not be introduced much beyond the internal os.

b. In all cases in which there has been a prolapse of the omentum, or of intestines into the uterine cavity; in all cases in which associated injuries of the intestines or omentum co-exist, or in which there are reasons to fear a significant internal hemorrhage, laparotomy is urgent.

c. Once the abdominal wall has been opened the visceral lesion must be repaired. The uterine puncture, if small, need not be sutured. If large (when the perforation is large, you can not depend upon the contractility of the uterine muscle to entirely occlude it) if of the nature of a tear, of a laceration, it is better that it be sutured. One or two layers of sutures may be used. Whether small or large, if the perforation be the seat of hemorrhage, suturing is indicated. In the following cases the operator deemed it wise to suture the perforation: Cases 10a, 14c, 20, 22, 31, 47, 50, 87, 88, 89a, 89b. All these cases recovered, excepting Cases 10a, 20, 89a; complicating intestinal lesions, necessitating resection of gut and enterorrhaphy were present in each of these three fatal cases. Some operators, as Jarman (case 84) made use of both superficial and deep sutures. Some clinicians recommend that a laparotomy be performed for all perforating wounds of the uterus. They base their teaching upon the following considerations:

(a) That the exact size of the perforations is not known.

(b) That hemorrhage may be taking place from the peritoneal surface of the wound.

(c) That in the absence of a laparotomy we can never tell with certainty whether any other intra-abdominal organ is injured.

13. A healed perforation of the uterus apparently does not interfere with the normal development and the normal termination of a subsequent pregnancy.

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## LEFT NEPHRECTOMY FOR HYPERNEPHROMA.

REMARKS ON THE METHODS TO DETERMINE THE PRESENCE AND FUNCTION  
 OF THE OTHER KIDNEY; THE OBLIQUE MUSCLE SPLITTING INCISION  
 IN SELECTED CASES PERMITS THE OPENING OF THE PERITONEAL  
 CAVITY AND TO ASCERTAIN THE PRESENCE, SIZE AND  
 SHAPE OF THE OTHER KIDNEY.\*

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Mr. President and Members of the Society: Permit me to present for your consideration the following case of hypernephroma:

Mr. L. M., aged 43; family history negative. Personal history: Neisser's infection 18 years ago; lues infection 15 years ago. Present illness: The patient has had the best of health up to April 2, 1908. Weighs 212 pounds. (a) About April 1, 1908, on urinating he noticed that the urine was of a plum color. As he was well, he paid no attention to it. April 2, at about 2 p. m., he was seized with a pain with the maximum of intensity in the left inguinal region running parallel with the inguinal canal, ascending along the ureter as high as the left kidney. This pain was very severe, and lasted until 5 p. m. He was obliged to retire to his bed and required morphin and local applications to control the pain. No other symptoms or signs present. The next morning he was able to resume his work.

(b) Three weeks later he had another similar attack of pain, lasting about three hours. Additional symptoms appeared; he was nauseated, and the pain felt in the left kidney region radiated toward the epigastrium. Three hours after the onset of the pain he had a severe hematuria, which lasted from four to six hours, urinating frequently and voided large quantity of bright red blood. No clots. During this attack he was under the care of Dr. C. Vermeren, who made a diagnosis of stone in the kidney or a renal tumor. The microscopical examination of the urine showed a great number of red blood cells, albumin, pus cells, no casts. To exclude gumma he was now instructed to take a very aggressive course of antispecific treatment, which was carried out for five weeks, with negative results.

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\* Read before the Chicago Medical Society (Presentation of Cases), Nov. 25, 1908. For discussion, see page 212.



(e) He remained well for five weeks, and then the third attack appeared. During this attack the pain was more severe, and the bleeding greater and lasting longer, ten to twelve hours. During these attacks he has never had any chills, no fever, no loss of weight. On about the 15th of May he was seen by Dr. Vermeren and myself and was recommended to enter the Policlinic Hospital for a thorough study of the case.

*Examination.*—The patient weighs 212 pounds; no superficial evidences of syphilis; chest and abdomen negative; the kidney is not palpable; no pain or tenderness over the left kidney; no enlargement of the organ to be made out. The skiagrapher tells us that at the site occupied by the left kidney there is a large mass. On account of the skiagraphic information, Dr. C. Vermeren believed the patient had a renal tumor. Urinary findings: Secrete about 60 ounces in 24 hours; very opaque; reaction neutral; contains red blood cells in great number, a few pus cells, no casts, and traces of albumin.

*Cystoscopy.* It was impossible to introduce the smallest of filiforms into the bladder, on account of a deep-seated stricture which had become aggravated during these attacks of renal colic. The functional test of Voekler and Joseph did not give us any information, as the color of indigo-carmin could not be made out. With the phloridzin test of Casper and Richter modified by Kapsammer, which produces an artificial glycosuria, the sugar appeared forty minutes after the injection, a delay of about fifteen minutes. Cryoscopy being so unreliable, it was not carried out.

*Diagnosis.*—(a) The findings are in favor of a renal tumor, viz., severe hematuria, renal colics and the skiagraph showing an enlargement of the kidney and the absence of a renal calculus. Gumma was excluded on the ground of the patient's good condition, the absence of any other symptoms of syphilis and the negative results obtained with the antisyphilitic treatment.

(b) Possibly the second kidney has a good functional capacity. This conclusion, which later proved to be correct, was based on the health of the patient and the quantity of urine voided. For if he possessed only one kidney and the latter was invaded by a tumor, we believe the patient would have shown other signs of urinary difficulties, viz., a deficient amount of urine.

The patient was advised that the only hope lies in the operative treatment, and that it must be instituted at once. Operated June 12; left the hospital June 20, and resumed work August 20. While operating, those present, namely, the interne, Drs. C. Vermeren and Ritter, assisting, and myself, took special notice of the great friability of the kidney tissue and the tumor, and a great tendency to bleed. The renal vessels were reached and clamped. The ureter clamped, crushed, and ligated with catgut at about the brim of the true pelvic inlet. The cavity left by the removal of the tumor oozed freely and required packing with gauze, which was removed on the fifth day. The wound healed by primary union, with the exception of a small sinus which persisted and showed a tendency not to heal. On July 25th we injected this sinus with E. Beek's bismuth paste No. 1, one ounce under low pressure. After injecting about half an ounce, the patient complained of a pain in the groin, and expressed a desire to urinate. It alarmed him very much when he urinated the paste, which had found its way into the open ureter and into the bladder. The paste injection was discontinued, the wound dressed with slight packing for three more weeks, and then healed. In the future I would use chromic catgut for the ureteral ligation. At present the patient is perfectly well, normal weight, and the function of the remaining kidney equals that of both kidneys.

Recapitulating the symptomatology and course of the growth up to the time of removal, we note, first, the tumor reached a considerable size without causing any symptoms; second, the patient retained his normal weight; third, the important clinical symptoms were: discoloration of the urine, attacks of renal colic, the maximum of pain being felt

in the inguinal region, hematuria, and the skiagraph showing the enlarged renal mass.

Hematuria is an important clinical symptom for differential diagnosis, if observed early. It is either spontaneous or following a cause (trauma, palpation, etc.). The quantity of blood varies in different individuals, and in the same individual at different times. Usually the blood is mixed with the urine, but it may also appear in thread-like clots. As to the frequency of hematuria, the reports vary. P. Wagner observed it in 80 per cent. of his cases; Israel in 92.1 of malignant kidney tumor; Albrecht only in 11 of 28 cases, or 39.3 per cent. The hematuria may last a long time, as reported by the following authors: Grawitz, 5½ years; Bruse, 6 years; Manasse, 5 years; Luborsch, 3 years; Hildebrandt, 8 years.

Kuznik claims the spontaneously beginning and suddenly stopping hematuria to be the first sure sign of a hypernephroma, especially if the urine is colored uniformly or shows worm-like clots, with long thin impression.

The pain is as important an early symptom as the hematuria. Cachexia, unlike carcinoma and sarcoma, is frequently absent. This statement also applies to some cases with metastasis. Albrecht writes that hypernephroma may exist for years and cause no cachexia. Kuster claims the right kidney is most frequently affected, but Albrecht in 28 cases observed 19 were in the left kidney. Solms (1904) writes that he found only one case (2½ years old) reported younger than 35 years of age.

E. Hoffmann states that malignant hypernephroma may not cause any of the cardinal symptoms, and that the symptoms and signs of metastases are the first manifestation of the hidden serious renal growth. A peculiarity of hypernephromas that differentiates them from all other malignant tumors is, according to Albrecht, the formation of single bone metastases by the way of the circulation. Hoffmann reports two such cases; Israel one case; Albrecht four cases, and Halstead one case.

The prognosis can not be made with any degree of exactness, for the opinions regarding the benignity and malignancy of a hypernephroma differ. Solms believes that every Grawitz tumor is malignant. Kroenlein considers hypernephroma as belonging to the most malignant tumors, marked especially by local recurrences. He reports a case with local recurrence eleven years after operation. Albrecht writes that of 16 operated patients, 9 died of local recurrence. Metastases usually take place through the veins, but also by the lymphatics. Henke saw several times malignant hypernephroma grow into the right heart (the metastases per the inferior vena cava). Kozubowski reports a case of complete obliteration of the vena cava inferior with an established compensatory circulation during life; the patient died one year after operation. It is worth remembering that embryonal suprarenal gland tissue is disposed at times in other organs than the kidneys. Pick describes a primary hypernephroma of the ovary; Marchand, of the ligamentum

latum; Shmorl and Blendorfer, of the liver; Donati observed also a primary malignant hypernephroma of the liver.

Grasheimtz writes that there exists a type of benign hypernephroma and reports a patient, 89 years of age, always in good health, who died from another cause, the postmortem examination revealing a hypernephroma the size of a fist. He also states that hypernephroma may be quiescent for years; then become malignant. With a good functioning second kidney the mortality of nephrectomy in the hands of competent surgeons will be less than 10 per cent.

The determination of the presence of the second kidney in patients with a normal urethra, bladder and ureteral implantation is readily accomplished by cystoscopy. The function of the second kidney is not determined with the same ease. One may gain useful but not positive knowledge of true kidney function by ureteral catheterization and the use of the method of Casper and Richter, Kapsammer, Voelcker and Joseph, and Alberran. They should always be carried out, whenever possible, but in making our final deductions we must recollect that Rovsing, Israel, Kapsammer, Alberran, Wiebrecht, Kolischer and Schmidt, and more recently Beer, of New York, have reported cases as evidence that the toxin of the diseased kidney may reduce the function of the sound kidney to a minimum, thereby misleading us, with the results obtained with our present functional tests. This reduced kidney function is permanent as long as the diseased kidney is present in the body, but improves decidedly after the removal of the diseased kidney. In the class of cases demanding an immediate nephrectomy complicated by vesical diseases, such as diverticulum, chronic cystitis, tumors, preventing the use of the cystoscope and the cited tests, we possess other methods which should be used only as a last resort. In these desperate cases they are not only justified, but are of great value.

Fenger and Van Hook advise immediately prior to nephrectomizing of the diseased kidney to make a lumbar incision over the sound kidney and digital palpation of same.

Carl Beck, at a meeting of the North Chicago Medical Society, held two years ago, reported a method which is: incision, bring the diseased kidney into the wound and keep it there, incise the organ, dress the wound; put the patient to bed. The urine of the operated kidney escapes into the dressings; that of the other kidney into the bladder. Two or three days later return or remove the diseased kidney, if the kidney function of the sound kidney warrants the nephrectomy.

Casper lately reports a case of left nephrectomy, and ascertained the presence and function of the right kidney by the following method: He delivered the diseased kidney into the wound, clamped its ureter, irrigated the bladder until the irrigating fluid returned clear, left the catheter in the bladder, then injected subcutaneously indigo-carmin and eight minutes later he noticed blue urine escaping from the catheter.

I have not mentioned urethral obstruction as a contraindication to cystoscopy, as it may be overcome by dilatation or incision. If, unfortunately, an acute urethritis should exist, I believe that cystoscopy is

justified if the infection is not too severe and the condition of the patient too critical. For the information to be gained by it is very important to help preserve the life of the patient. But we must also not forget to consider the seriousness of an epididymitis, cystitis, or a systemic infection that a cystoscopy may provoke.

The oblique lumbar incision beginning from the interspace between the tenth and eleventh ribs, carried downward and inward toward the middle of Poupart's ligament, possesses decided advantages. The muscles should be divided parallel with their fibers and not cut. The length of this incision will vary with the size of the renal tumor to be removed. The largest growth will require the cutting of only the internal oblique muscle. By displacing the peritoneum forward and inward one may reach the renal vessels and clamp them with a minimum amount of renal manipulation, thus preventing infectious material or malignant cells from entering the renal vein, as well as preventing a possible serious hemorrhage, for a suppurative kidney or a kidney invaded by a malignant tumor is very friable and easily torn from its vessel. The particular point which I wish to bring out is that with this incision as recommended by Kocher and in selected cases, such as non-infected cystic kidney, hypernephroma, other renal tumors and subparietal injury of the kidney demanding an immediate nephrectomy, and in whom cystoscopy is contraindicated or impossible to be carried out, the peritoneal cavity, if necessary, may be opened by dividing the peritoneum in the lower half of this incision: introduce the hand into the abdominal cavity and ascertain by palpation the presence, size and shape of the other kidney. It is true we can not determine the kidney function with the tip of the finger, but if the kidney is anatomically normal its function will be correspondingly approaching the normal.

The objection to opening the peritoneal cavity for fear of infecting it should always be taken into consideration. There is always the possibility of this accident occurring. However, in the majority of instances and in selected cases, as previously cited, the infection will not take place. Edebohl, Ferguson and others have, while performing a nephrorrhaphy, opened the peritoneal cavity through the same incision, palpated the gall-bladder region, and removed the appendix successfully. The writer himself has performed through this incision twelve nephrorrhaphies, with the removal of the appendix, without infection. Case 13, a patient in bad health and specific, infection of the wound occurred; however, no peritonitis.

The methods of incising over the sound kidney possess the disadvantages of requiring an additional incision, which must be of considerable size in fatty subjects. A longer anesthesia and a changing of the position of the patient, all these factors also militate against the percentage of recovery, for they increase shock and invite infection in both wounds.



PATHOLOGICAL REPORT. M. HERZOG, M.D.. CHICAGO.

## HYPERNEPHROMA.

The tumor, which is spherical in outlines, but somewhat flattened, anteroposteriorly, is of the size of an average apple; its longest diameter identical with the long diameter of the kidney is  $3\frac{1}{2}$  inches. The neoplasm is situated at the upper pole of the kidney; its external surface is



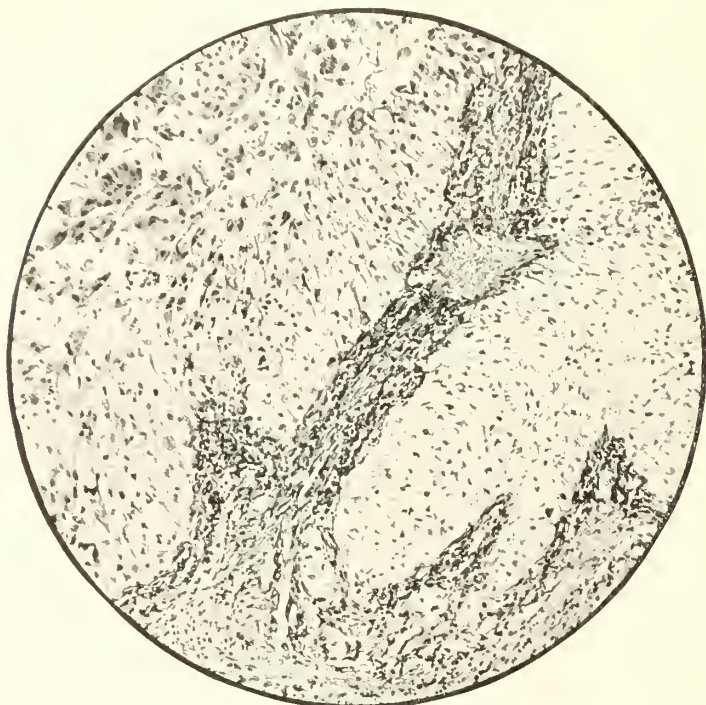
Hypernephroma. Actual Size.

somewhat uneven and nodular. On the cut surface the tumor looks mottled; it is subdivided by fibrous bands into compartments varying from the size of a hazelnut to that of a walnut. The tumor tissue contained in these spaces bounded by fibrous septa is mottled in appearance, decidedly yellowish spots alternate with dark hemorrhagic areas. The neoplasm in its growth has evidently not destroyed and replaced the

renal tissue, but has compressed it and pushed it aside. The lower half of the kidney is well preserved, while what is left of the upper portion is a mere cap, which sits laterally on the tumor. The latter, as to its situation, appearance and relation to the kidney, has all of the characteristics of a hypernephroma, developed from an embryonic inclusion of adrenal in renal tissue.

With the tumor and the kidney had been removed a considerable mass of perirenal fat.

Microscopic Examination: Sections show that the tumor cells proper are large epithelia with round or oval vesicular nuclei. The cell body is generally vacuolated and in many places the protoplasm of the tumor



Hypernephroma, Section  $\times 100$ .

cells has entirely disappeared in consequence of fatty degeneration. The nuclei then appear to lie in a large vacuole. The cells are arranged around capillaries and small veins. They form, as it were, a mantle around the small blood vessels. However, the arrangement of the tumor cells is not, as is generally the case in hypernephroma, a close imitation of the zona fasciculata of the suprarenal cortex. In the tumor under discussion the cells are more irregularly grouped in round masses which look more like the zona reticularis than the zona fasciculata of the suprarenal.

From the small thin-walled tumor vessels there has been a good deal of hemorrhage and free blood and the remnants of degenerating hemo-

globin are found throughout the tumor tissue. Many of the tumor cells are necrobiotic and whole tracts are in a state of coagulation necrosis. These degenerative processes have led to a good deal of inflammatory reaction in the tumor tissue proper and around it in the fibrous septa and capsule.

The renal tissue in the lower portion of the kidney is mostly in a fairly normal condition. The compressed upper part shows pressure atrophy of tubules and glomeruli, chronic interstitial changes and more acute inflammatory infiltration.

From a surgical standpoint the gross pathologic characteristics of a hypernephroma are of value to the surgeon, and with them we may with



Hypernephroma, Section  $\times 100$ .

a fair degree of accuracy make the diagnosis of a hypernephroma. Grashewitz recapitulates the characteristic anatomical points of hypernephroma: (1) Subcapsular situation. (2) Peculiar yellow color, due to fat. (3) Hemorrhagic areas give the tumor a distinct color appearance. (4) Knotty or bulbous shape. (5) Iodized starch solution is decolorized by the extract of the tumor (Croftan). (6) If the hypernephroma develops from adrenal gland tissue, deposited in the kidney, according to the theory of Grawitz, we should be able to find adrenalin in the extract of the tumor.

In the anatomical differential diagnosis the consideration of carcinoma, sarcoma and particularly the adenosarcomata as described by

Birch-Hirschfeld must be taken into consideration. The latter growth occurs in contrast to hypernephroma in early childhood, nearly always bilateral, form early metastases, and are always fatal. The majority of surgeons are of the opinion that a hypernephroma should be treated with as much radicalism as the most malignant tumors.

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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF THE ILLINOIS STATE MEDICAL SOCIETY.

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FEBRUARY, 1909.

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## WOMEN IN MEDICINE.

Some time since our attention was called to the statement that the number of women undertaking the study and practice of medicine was rapidly decreasing, and to secure facts upon this important subject we have communicated with the officers of every medical college in the country and have secured answers to the following questions from a large proportion of these colleges:

1. Did your school ever admit women as students?
2. If so, when did you withdraw the privilege, and why?
3. If you still admit them, do as many apply for admission now as formerly? How many are registered in your school this year?
4. If there is a falling off in the number of applicants, to what do you attribute the diminution?
5. Have women, in your experience, as a general rule, succeeded in study and practice as well as men?
6. Any further information on the subject will be appreciated.

In the first place, it appears that a large proportion of the medical colleges devoted exclusively to the medical education of women have become extinct. The number in this class is 10; the most remarkable examples have been the Northwestern University Woman's Medical Col-

lege, Chicago, which, after a long career, was closed in 1902; the St. Louis Woman's Medical College and Hospital, closed in 1896; the Woman's Medical College of the New York Infirmary, New York City, closed in 1877; and the Woman's Medical College of Cincinnati, merged into the Laura Memorial Woman's Medical College of Cincinnati, which institution closed in 1903. Three out of the 10 colleges merged into other colleges and 3 are still in existence, but with classes considerably reduced in size. The largest of these is the Woman's Medical College of Pennsylvania at Philadelphia, which had 138 students in 1907-8 and 32 graduates. The others are the Woman's Medical College of Baltimore, Md., which had 28 students and 11 graduates in 1907-8; and the New York Medical College and Hospital for Women (Homeopathic), New York City, which had 20 students and 3 graduates in 1907-8—making a total in the three schools of 186 students in 1907-8 with 46 graduates at the close of the last reported session.

Of the 112 colleges not exclusively for women, 36 did not admit women to the study of medicine and 74 do admit women to the courses on the same terms as men, and the total number of women students in these co-educational schools is placed at 504 for 1907-8. This, together with the 231 women attending the women's colleges, makes a total of women students of medicine in America 735 or about 3.7 per cent. of the total number of medical students, compared with 3.8 for the previous year. Of the 74 colleges admitting women students in medicine, 18 show an increase in the number of women students and 56 show a decrease. There were 185 graduates this year as compared with 211 the previous year and 233 the year before that. The total number of women students has decreased from 1,244 in 1904 to 735 in 1908, and the graduates from 198 in 1904 to 139 in 1908.

From these statistics it will be seen that the statement is true that the number of women medical students and graduates at medical colleges is undergoing a notable decrease, and under these circumstances the remarks of some of the officers of medical colleges become of great interest. Almost without exception the officers testify to the *good qualities of women as medical students and their non-success as practitioners*. One officer remarks as follows: "Women succeed in study better than men to this extent: they answer questions better and achieve better scholarship records than men, but the apparent superiority of women disappears on commencement day." Another says: "Women excel in courses where memorizing is important and in the acquisition of laboratory technic, while as a rule they are not so strong on the logical side. As to their success in practice—the prejudice in most communities is pretty strong. For over forty years women have had a fair opportunity to study medicine in good schools, and although several thousand have graduated and gone into practice, yet the number who have attained any distinction is extremely small. This is largely to be accounted for, however, by the fact that women in medicine is a case of the 'survival of the unfittest' all along the line." Another says: "If there is a falling off in attendance of women it is probably due to the fact that there are so

many vocations open to women now which were formerly closed. As far as scholarship is concerned, women rank as high as men, it seems, and often lead their classes. In practice they probably succeed in about the same way men do—that is, there are some who have made very successful practitioners.” Another says: “The decrease in the attendance of women is due to the rigid requirements.” Another says: “Women do some medical work well, but eternal laws limit their function and leave the more serious medical work in the hands of men.” Another: “As a general rule women have been excellent students of medicine, acquire facts readily and retain them well; but in general practice they have not appeared to be as successful as men. Of course there are brilliant exceptions to this general rule.” Another: “As students women are equal to men: in practice they have measured up well with the men.” Another: “There seems to be a general decrease in all medical students. Women in study and in practice have succeeded as well as men.” Another: “We are registering as many women proportionately as in former years. Women succeed as well as men in study and practice.” Another: “I can not account for the falling off in the attendance other than that women eventually are having more difficulty in succeeding in the practice of medicine than, possibly, twenty years ago. They do not seem to be able to get a large proportion of cases of women and children to which they might be justly entitled. This is particularly true in cities. In the country places it is more a question of physical hardship. It has seemed that three out of four women who have studied medicine with us should not have taken up the subject for various reasons. The fourth, who was fitted for the study, was unusually successful and stood well above the average of the class and subsequently made a very successful physician.” Another: “They succeed in study and practice as well as men.” Another: “Have had 7 women students since 1896; 3 graduates, 2 dropped out after the second year and 2 remain. Two of the 7 (1 of them notably) were fine students. Of the other 5, 2 were bad and dropped out and the other 3 were only average. Two graduates are practicing successfully and the other one, after a few years, went into some other business.” Another: “Women do equally as well as men in study, but physically are sometimes unable to succeed in practice as well as men.” Another: “We admitted women for forty years. Main reason they ceased to be students here was because of the sentiment which developed against them in the school.” Another: “More women apply for admission than formerly. They have succeeded as well as men.” Another: “Those women whom I have met professionally seemed in the main to be intelligent and skilled along those lines which women would naturally follow in the way of medical specialties.” Another: “I do not think that, as a rule, women graduates have succeeded in practice as well as men, although our experience has been that they have stood well in their classes, sometimes winning the honors from the men.” Another: “They are (as far as we have observed) succeeding quite as well as male practitioners.” Another: “Women do not have the courage or strength to endure the hardships

incident to a successful physician's life. I have never known a woman to make what I call a success in the practice of medicine. I fear that the great majority of them are abortionists, which gives them their greatest source of revenue." Another: "Two graduated and made fine grades. See no reason why women should not succeed in practice as well as men if equally talented and have good advantages, especially in certain diseases." Another: "The diminution is because the course is becoming too heavy. Our requirements are now much higher and the course is lengthened and embraces more subjects. Women do not seem to be able to stand up to the work." Another: "In some branches they are doubtless as good as men, but in general I think not." Another: "Women seem to succeed as well as men. There seems to be very little inclination on the part of women to take up the strain of a medical practitioner, although there are two or three quite successful female physicians in this city." Another: "Since this school opened in 1902 we have had but one woman student and she did not finish but married later." Another: "They do fully as well as men in carrying out definitely prescribed work, but are much less apt to show initiative. This seems to be the case with women practitioners. There is without doubt a field justly open to women physicians, but for most of them this field would be largely in those lines of medical practice where well formulated methods of procedure are most definitely outlined, and especially where careful nursing enters into the problem." Another: "They have succeeded in study as well as men, but not in practice." Another: "They have succeeded in study and in practice as well as men." Another: "From the beginning of this school in 1877 the proportion of women students gradually increased until they numbered about 20 per cent. of the total. This proportion has diminished until we now have none in the last three classes and but one senior. A number of causes have conspired to this end, namely: 1, absence of opposition, which was no doubt an attraction at one time; 2, no longer a novelty; 3, increased entrance requirements and course of study; 4, increased cost and time of study; 5, increased amount of laboratory work; 6, think probably women find greater difficulty than formerly in practice. With few exceptions, my experience has shown that women have made excellent students—theoretically, among the best. Their examination papers were, on average, better than those of the men. They have made the best students, but do not succeed so well practically." Another: "As to the success of women, they have succeeded as well as men in study but not in practice, although many of our female graduates are among the best practitioners in the city and state (California). The decrease in attendance of women is attributable to the more difficult curriculum." Another: "Higher standard for matriculants is the cause of the decrease in applicants." Another: "The privilege of admission of women was withdrawn in 1902; principal reasons were the low or ordinary grade of women that applied, and they seldom practiced legitimate medicine, did not grace the profession, and were more or less troublesome during their attendance in mixing up in vari-



ous ways with male students. They have not, I think, succeeded as well as men in the practice of medicine, only here and there an exception." Another: "Various reasons are given for the falling off in attendance of women: increase in entrance requirements; the fact that the profession of nursing has been greatly developed in the last ten years and its standing elevated, and it is said women who would formerly have studied medicine now take up the profession of nursing; so many more avenues are now open to women than formerly. As to their success, women do good work in text-book and recitation course and in the laboratory courses where definite tasks are set, but as a rule they are not as original as the better type of male students. However, there are exceptions to this rule, of course. Our women graduates have succeeded well in practice and in scientific work, quite a number doing very creditable work in the laboratories here and elsewhere, others very successful practitioners, both in internal medicine and in gynecology and surgery." Another: "No students are accepted except those who expect to devote their lives to work as missionary physicians. This year out of a total of 60 in the graded course there are 22 women. There is a wide field of usefulness for women as missionary physicians, and we have no reason to think they do not succeed in their particular line as well as men." Another: "Diminution in number of applicants throughout the country is probably due to the fact that women in general do not look to a woman physician or surgeon when there is anything seriously wrong. Woman as a student is up to or above the average man but far below as a practitioner."

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#### CHANGE IN THE METHOD OF ADMINISTERING STATE INSTITUTIONS.

The present method of administering the state institutions by local boards, the members of which are appointed for political activity and receive no compensation for their work, is, as we have had occasion to frequently remark, inadequate and inefficient. Two members of one of the largest institutions of Illinois have been absent from the state for several years and have, of course, been out of touch with the management and needs of the institution. These men having nothing at stake can not be severely criticised for their lack of attention to duty, and, on the other hand, the institution has probably been conducted as efficiently without their presence as it would be if they were to visit it once every ninety days, as was their custom.

One of the bills introduced into the senate provides that there shall be a central board composed of three members who shall give their entire time to the management of these institutions and be given salaries adequate to the responsibility involved. This plan of managing the state institutions appeals to us as an excellent one, and we hope our readers will lend their indorsement to securing a passage of the bill providing for the appointment of such a board. It will, of course, be

fought by local interests who see in the institutions simply means of getting appropriations to be expended in building up their respective communities.

One of the state officers said many years ago, "That the state could well afford to burn down all of the existing institutions, sell the grounds upon which they stood and collect all in one community where the entire sum necessary to care for the unfortunates could be expended in a business-like way."

Several of the younger states are taking this view of locating the charitable institutions, and while it will probably never be possible to carry out such a plan in Illinois, yet the next best thing of having a central board of management should be, and we believe will be, finally adopted. In the meantime full credit should be given to the present State Board of Charities for the successful efforts they have made to better conditions, notwithstanding the abuse that has been heaped upon them by certain cheap politicians from time to time.

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#### CHRISTIAN SCIENCE CALLED A FRAUD.

The Rev. Johnson Myers, Chicago, recently denounced Christian Science as one of the greatest menaces of modern times, stating it was a fabric of lies and fraud built upon a foundation of error. He declared from his own personal knowledge this delusion was responsible for scores of deaths. He himself has charge of at least one funeral a month which is directly chargeable to Christian Science. Some of the other things that Rev. Johnson stated are as follows:

"I remember that the first woman who left this church to become a member of the Christian Science organization died within two weeks. She went bravely, however, glorying in her agony. She declared to the last that there was nothing the matter, that she was quite happy and that she felt no pain.

"Why, there is a 'healer' who lives but a short distance from my own house, a few blocks from this church, who had been claiming to heal others, but finally got down seriously ill herself. Her father was summoned and found her in great agony. 'Now, if you wish to you may lie there in your pain all night,' he suggested. 'But if you want a physician I will summon one as soon as you say the word.' The word was said, the woman was taken to a hospital and an operation was performed for appendicitis according to the physicians' material plans.

"There isn't a hospital in this city which does not hold Christian Science members who are being treated with medicines and by physicians."

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#### A NEW UNIVERSITY IN CHICAGO.

The latest "University" to be opened in Chicago is "The Illinois Kiro-Practic University Adjusting Parlors," which has been advertised prominently in the Chicago papers as located at No. 39 State street.

The only claim made for this practice is that it cures affections of the eyes, throat, lungs, nose, heart, stomach, liver, spleen, bowels, kidneys, bladder and reproductive organs—all done without the use of drugs or knife. The school is to be opened February 1, 1909. Pressure is taken off of the nerves that are being interfered with and this leads us to believe that Kiro-Practic is another form of osteopathy.

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#### LAKE COUNTY TUBERCULOSIS INSTITUTE.

The progressive physicians and citizens of Lake County have voluntarily gone to work to combat the great white plague by a voluntary organization known as the Lake County Tuberculosis Institute. The total number treated in 1908 was twenty-seven, and the committee is making an appeal for \$10,000 to enlarge grounds and put up permanent buildings. The charges for private cases are \$40 per month, which covers everything. Besides treating the sick, a pamphlet giving valuable information is distributed to the community, and undoubtedly such organizations in every county would be a great factor in stamping out the disease.

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#### CIVIL SERVICE EXAMINATION.

The Illinois Civil Service Commission will hold examinations for various branches of State service and have requested us to make special mention of the examination to be held on May 6, 1909, when examinations will be held for positions in the hospitals for the insane and for the Eye and Ear Infirmary of Chicago. At least twenty (20) places are open for physicians and surgeons at this time. Further details will be found in the April issue of *THE JOURNAL*.

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#### IMPROVED VITAL STATISTICS BILL.

Efforts will be made by the various organizations to secure for Illinois a vital statistics bill, up to date in every particular, and we believe there is a fair prospect of success in this session of the legislature. We hope our members will all work together and give the State of Illinois such a law as will place our state in line with other progressive commonwealths of the Union where she belongs. We shall have further observations and suggestions on this matter in the next issue of *THE JOURNAL*.

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#### THE FEE SPLITTING.

Again this month we present several communications on the fee-splitting proposition and have received assurances from many readers of the considerable interest that has been aroused on this question. We shall limit our editorial utterances this time to the following axioms,

which seem to us self-evident, and a statement of some of the abuses which have been brought to our attention as follows:

#### AXIOMS.

1. The specialist should consider the patient's ability to pay when making his charges.

2. The family physician should make an exact and truthful statement of the patient's financial standing.

3. The specialist should make a reasonable charge and in no event charge so much that nothing is left with which to pay the family physician an adequate fee.

4. The attending physician in selecting a consultant should choose the one most skilled in treating the particular disease with which his patient is afflicted. In no case should his judgment in this matter be influenced by the money question.

5. The attending physician should not send a patient able to pay a fee to a free clinic or hospital for operation where the patient will receive the charitable services of a physician or surgeon.

#### SOME OF THE ABUSES THAT HAVE BEEN BROUGHT TO OUR ATTENTION.

1. A surgeon makes an arrangement with a general practitioner in the country to get together as many operative cases as possible. On a signal the surgeon comes to the small town or city, operates on the case or cases, relying necessarily on the diagnosis of the general practitioner. As much money as possible is collected from the patient, his relatives or friends, and the surgeon, after making a certain division with the general practitioner, returns to his city home and, fortunately or unfortunately, never sees his patients again. Instances have been reported where the surgeon has made only one such excursion to a given community.

2. A surgeon under similar circumstances makes such an excursion, makes the uniform charge of \$100 for each case operated on. The general practitioner makes and collects such a fee as he sees fit and retains all over \$100. A practitioner has been known to collect \$400 or \$500 for an operation, for which the operator received only \$100.

3. A patient of very limited means is sent to a city hospital where an operative procedure on the head is undertaken for epilepsy. No contract as to the charge was made before the operation. This operation consisted merely in making an incision through the tissues down to the skull. The incision revealed no indication for further operation and the wound was closed. A charge which entirely exhausted the financial resources of the patient was made and paid, although the surgeon was entreated by the friends of the patient to make a smaller charge. This overcharge seriously embarrassed the patient for years. Ten years later the cause of the epilepsy was found elsewhere and an operation performed by another surgeon which resulted in a cure. His compensation for a successful operation was one-fourth that of the fake operation.

4. The general practitioner telephones the surgeon that he has a case for operation ready for the train, wishes the operation performed as



soon as it reaches the hospital so that he (the practitioner) can take the first train home. Under these circumstances rush operations are performed, often to the detriment of all parties concerned.

### PREVENTION OF OPHTHALMIA NEONATORUM.\*

Dr. Wilder, Dr. McNally and Mr. Babb were made a committee to prepare specific recommendations on the prevention of ophthalmia neonatorum. Their report follows:

"It is well known that ophthalmia neonatorum is the cause of a large proportion of blindness in this as well as other countries, and that in the special schools for the blind as many as 25 per cent. to 35 per cent. are there because of this disease. It is also a well established fact that by proper and comparatively simple means it may be prevented in a vast majority of cases.

"The state should enact a law having for its object the adoption of measures for the prevention of this disease at least in the practice of midwives and in public institutions where obstetric cases are treated.

"The State Board of Health seems to be the proper authority for establishing the necessary rules, regulations and ordinances and enforcing their observance, and for publishing and distributing appropriate information on the subject.

"It is probably best that the specific method to be used for the prevention of ophthalmia neonatorum should not be stated in any law, but should be left to the intelligence and judgment of the State Board of Health, believing that it will act in accordance with the most advanced existing knowledge. The following form of law is suggested in accordance with the ideas suggested above:

"An act to prevent inflammation of the eyes of the new-born babe, or so-called ophthalmia neonatorum:

"Section 1. The Board of Health of the State of Illinois is hereby vested with power and authority to publish and distribute such information and instruction, to furnish such remedies and to make such rules, regulations and ordinances as it may deem expedient to prevent the development of inflammation of the eyes of the new-born babe, so-called ophthalmia neonatorum, in public hospitals or institutions in which midwifery is practiced either wholly or in part, and in connection with the practice of midwives.

"Section 2. Said Board of Health is authorized to enforce its rules, regulations and ordinances on this subject at the expense of the state.

"Section 3. Any person violating any rule, regulation or ordinance of said Board of Health regarding the prevention of ophthalmia neonatorum shall be guilty of misdemeanor, and shall be punishable by a fine not to exceed \$100 or imprisonment not to exceed six months, or both.

"The above suggestions are in substance embodied in the report of the Committee of the American Academy of Ophthalmology and Oto-Laryngology co-operating with the Committee of the American Medical Association on legislative measures to prevent ophthalmia neonatorum, presented to the House of Delegates of the American Medical Association, June, 1908.

"The central feature of giving the State Board of Health direction of the whole matter and power to act is, in our judgment, a good one. A law similar in purposes to the one proposed would be more effective than the new one on the statute (Chap. 38, Section 510, Revised Statutes of Illinois) relating to the same subject, which by the new enactment could be repealed.

"According to the present law, which, so far as I am aware, is not enforced, the nurse or midwife who notices a discharge from the eyes of an infant within two weeks after its birth must report the same to a health officer of the town or some legally qualified practitioner within six hours of the discovery, under a penalty for failure to do so. The proposed new law contemplates that the mid-

\* Extract from the Report of the Illinois Commission to Inquire into the Condition of the Blind.

wife shall be *instructed* by the State Board of Health in the *method of prophylaxis*, which *she will be compelled to use in every case*, and, *in addition*, that she will *report any cases of the disease that may arise in her practice* to the proper authorities.

"WM. H. WILDER,

"J. T. McANALLY,

"C. E. BABB."

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## Correspondence.

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### THE DIVISION OF FEES.

JACKSONVILLE, ILL., Dec. 14, 1908.

*Editor Illinois Medical Journal.*

*Dear Doctor:*—I was much interested in the letter of my friend "Lege" on the subject of clandestine division of fees. He is right, but I do not see why he should have used my name in that connection. It may have been his busy day and he read no further than the fish story in my article published in the November JOURNAL. More likely fee division is a bogey with the doctor, created by his own personal experience with venal physicians. After reading his admirably candid letter in the December JOURNAL I do not wonder that he withheld his name, lest the practitioners with whom he has had to deal come and rob him of the little that he admits he has left. It is worse than I thought, but no one can doubt the honesty of the doctor's letter.

If all the surgeons were like "Lege" my article need never have been written. On the other hand, I also have as clear a record. No man ever understood me as asking, receiving or hinting at a clandestine division of fees, and, in turn, no man in Jacksonville ever offered me such division. I did not need to say this in my own society. I have received commendatory letters regarding my article from physicians in all parts of the state, but in none of them was the subject of fee division mentioned. It took the surgeons to read that into it. A note from a former president of the American Gynecological Society said: "Your points are, in the main, well taken."

All of us know that the offer of fee division in its worst form came originally from the surgeon to the physician, not the reverse, and in many cities does yet. It is a Frankenstein created by the surgeons themselves, which they are no longer able to control. It was offered by a certain class of surgeons as a bait with plausible arguments for its acceptance and in turn is now demanded by the same class of physicians as a right.

The two extremes, as presented by "Lege" and myself, are: First, The specialist is asked to rob the patient of more than he thinks his work is worth in order that he may have sufficient left after being himself robbed by the physician who advised the work. Second, the specialist ignores all the time, skill and responsibility invested by the physician, which may be as great as or greater than that of the operator, and from his coign of vantage, having no further use for the family, mercilessly charges as much for his work as if there were no division of labor

or responsibility, leaving no margin for the physician who has spent ten hours to the surgeon's one on the ease. If the profession can find no mean between these extremes then woe to the profession.

An operation is often an incident in a long spell of sickness in a family where doctor's bills must be reduced. Why should there not be an honest division of fees in such a case? Why should the physician do all the reducing? Why is it rank heresy to inquire the amount of the surgeon's fee in trying to fix one's own? Why must this whole subject be discussed in whispers, like the subject of where the baby comes from?

Very truly yours,

DAVID W. REID.

## IN THE MATTER OF SPLITTING FEES BETWEEN SURGEON AND GENERAL PRACTITIONER.

It was as certain as anything in this world that the practice of splitting fees as pertaining to surgical operations should at some time meet with the serious attention of the medical profession. The question in the main is, "Upon what meat doth the medical profession feed that should differentiate them from the sea of grafters that surround the profession on all sides?"

It cannot be denied that the whole country is permeated with graft and we feel disposed to be angered because, forsooth, some medical men fall under that malign influence. The medical profession is recruited from the great body of the people, and it is certainly ungenerous, to use no stronger epithet, to expect them to be radically different from those from whom they sprang.

There is one law of natural philosophy which is inexorable, and that is, that water will not rise above its source. Under these conditions is it not sublimely innocent or superlatively stupid to discuss the morality or the ethics of the medical profession, and to endeavor to determine their viewpoint in regard to the practice of a division of the fee paid by the patient for an operation between the operator and the general practitioner? The very fact that such a condition should exist and should require ventilation is certainly a confession to a state of moral turpitude which is appalling, as it presupposes a general state of moral turpitude existing throughout the whole body of society as organized in the United States. Take a sweeping and wide view of all that goes to make up our political and social organism and make a fair analysis of the same, and we will at once see that there may be some injustice done in the wholesale denunciation of those medical men who may indulge in a small way in the great game of graft.

Look at our Senators, our Legislators, our great daily newspapers (the pabulum upon which our minds are fed daily).

Our Senators bribing and cajoling their way into the senatorial chamber. Our legislators ready ever to hold up anybody or anything that may come along, from a young lady government clerk to a \$1,000,000 corporation. Look at our politicians, political canters and ranters, ignorant, uncultured and untutored, vulgar and loud mouthed, inherently

dishonest. Look at the Mayors of our large cities, our City Councilors, our State Legislators, our multi-millionaires, our express and telegraph and railroad holdup companies, look at some of our labor leaders, our trusts and our monopolies (these last alone graft the people for \$1,750,000,000 a year). Was there ever in modern history such a hell broth of scoundrels bunched together?

The pity of it all is that we are all in the same boat, engaged eternally in picking one another's pockets. Some of us travel as saloon or first-class passengers, others of us travel second class, others again third, others in the steerage, others again are stokers in the hold, but we all go to make up the pirate crew.

Take a look at the number of feticides committed each year in the United States; their sum total is appalling. Who are the perpetrators of this heinous crime? The unborn cry to God for vengeance, for their's has been a cruel, bloody, cowardly extinction. The helpless unborn destroyed for \$15 and up per head. Then what about the records of our divorce courts? Take all into a sweeping perspective, does it not look pettifogging and picayune for the medical profession to go into hysterics because some medical men have become morally insensible and make it a practice to divide fees?

Of course the general practitioner holds up the surgeon. "Pass over so much," says he, "or I will throw the case over to somebody else." The surgeon stands between the devil and the deep sea, he "cusses" his fate, but hands over nevertheless. Then, again, the surgeon often throws out the inducement of the partitions of fees to tout for business. It is all in the great game of graft. We are all sovereigns in our own right and must perforce defend ourselves against all comers. To do this successfully we must have money; thus to get money has become the cardinal feature of American life to-day.

Without money we are nothing. Money has become the Alpha and the Omega of our existence. Get money—honestly, if you can, but you must get it; if it becomes necessary to counterfeit conversion to get money, by all means counterfeit conversion—the hypocrisy will be forgiven, but the want of the dollar never. Everywhere the dollar is worshipped and glorified. Everything is subordinated to the acquisition of the dollar. Loyalty, character, honesty, morality, religion, erudition, sensibility, imagination—in fact, every attribute that tends toward the uplifting of mankind. The man with the barrel of dollars is the man that is looked up to and honored irrespective as to the means taken to acquire that barrel.

Did we not as a government, through the immense preponderance of our power, hold up little insignificant Colombia and benevolently assimilate the Panama strip? From top to bottom, from core to rind, the corruption of graft has been slowly rotting our whole natural existence. Are the medical men to become the saviors of the country? Is this the little lump of leaven destined to leaven the whole mass of corruption? A most formidable task. We are to set the example. We are to blaze



the way. We are to be the pathfinders for the regeneration and the uplift of the whole nation. What sublime ambition! How shall we begin? What about those murdered unborn? Shall we stop slaying them by the hundreds annually? Regenerate ourselves? Stop aborting women and dividing fees with surgeons? What sublime simplicity! Our masters, the grafting public, uphold and patronize the abortionist; why, he is a good fellow, so they give him applause, patronage, money and a competency. They see no act of venality in the general practitioner holding up the surgeon on the one hand and the general public on the other hand.

The public have been educated to be held up, and the insignificant occasional holdup of the general practitioner and surgeon is altogether beneath notice. The public viewpoint is a purely commercial one. If the surgeon who operates allows himself to be held up on the one hand and the patient operated on permits himself to be held up on the other hand, whose concern is it anyway? People, they argue, should not be so unfortunate as to necessitate an operation upon themselves, and if such necessity should arise they are the ones to see to it that there is no holdup game between the surgeon and the family doctor. It is a matter that strictly lies with themselves. That the medical profession should step in under the disguise and pretense of ethics to stop the little game of graft and the double crossing of fees. Pshaw! What presumption! What colossal stupidity even to make the pretense of stopping grafting among a body of men when every inducement is held out and every encouragement given them by the general public to graft and grow fat! Why should medical men be considered as differing from anybody else? Is not the whole country engulfed in a sea of graft? Is there anybody bold or foolish enough to deny this very plain, patent and palpable fact? Nobody wants to hold a brief for morally insensible medical men, but our endeavor should be to be eminently fair-minded nevertheless.

Why condemn the product and leave the great causes untouched? It is sublime simplicity to expect an honest homogeneous product from a heterogenous mass of rottenness and corruption. How is this pure spotless product that we expect to find the medical profession to be to be generated? By the teaching of medical science and art? What stupidity! Have we not seen the sad spectacle of the impotence of a most strenuous President endeavoring to drive back and keep under the ever widening circle of graft by the vigorous wielding of the big stick? As well try stem the torrents of the Niagara with a broom straw. A protest should always be made when wrong is done, even when such a wrong is upheld by a perverted public opinion. But we should not forget that we medical men reflect the habits, the thoughts, the character, etc., of the age and the people among whom we live. We should try to be fair. Is it not a terrible indictment of the medical profession and the American people generally that such a condition should exist? Do these conditions exist among the medical men of other countries? Take, for instance, Germany, France, Italy, England. The practice of dividing fees if proposed to the medical profession of those countries would elicit expressions of amazement and horror. Perhaps these countries mentioned

have not advanced to that high state of civilization that we have here. They may be possibly benighted and unprogressive. They have not, in point of fact, been sufficiently educated and far enough advanced along the road of civilization to understand and grasp the "finesse" of the game of graft. May it be that the members of the medical profession of these respective countries are like camels, unable to see the humps on their own backs?

Probably our understanding of the words "meum" and "tuum" is gradually and irresistibly undergoing a metamorphosis. Possibly we are getting to understand the proper relationship of man to man. Dog eat dog is to become the motto of the twentieth century.

Possibly it may prove to be, in the general acceptance of a new moral code by the world, unjust to arbitrarily judge and condemn medical men for dividing fees and for ruthlessly destroying the unborn. If all these hideous presumptions are true it is as certain as anything in this world that salvation is close at hand. It will not be a salvation from the Lord, however, but it will be, as it were, a salvation from the Devil. Always and eternally yours.

JUSTICE.

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#### FEE-SPLITTING PROPOSITION.

Jan. 13. 1909.

*Editor Illinois Medical Journal—*

*Dear Sir:—*Any man who has been in active practice for the past thirteen years in this state and who has to make his living entirely from his practice has been in contact with the fee-splitting proposition often enough to sit up and take notice whenever this subject arises. The letter in the December issue is particularly interesting to me—so much so that I hope you may have room in your JOURNAL for a little more discussion and will permit it.

I make no pretense to any unusual surgical ability. I had no opportunity for a hospital service and what surgical training I have has been given me by contact with a few pretty good men; by such study as I can give these subjects, by some accommodating dogs—may they rest in peace, which most of them are doing—and by trying to do the little surgery which comes with a general practice in a town of 12,000 people as well as I can. So, as I said before, I am not a surgeon. But I am glad that this letter in the December number of the JOURNAL has been published for two reasons especially.

First, because this man who evidently is a surgeon, who has properly qualified himself for the special practice of surgery has decided to talk, to present his side of the case, to tell his troubles. I don't know who he is. I don't know whether he's sincere or not and I don't care. He has made out a good case for the surgeon and in the interest of fair play it is time that was being done. Maintaining a dignified silence, being above such carping criticism, etc., etc., is all right in its way, but unless that position is taken upon right principles, principles which bear being preached in their own vindication, that same dignity and silence will be

turned against the surgeon as a tacit admission of the truth of his enemies' statements. I can walk by the recumbent dog in the strange front yard with all the dignity of Hippocrates, but unless I am not only able but willing to kick that dog under the chin occasionally and kick him hard he won't respect me any, and he'll do me a lot of damage sometime or another.

Second, "Of every 100 cases referred to him but twelve were surgical." That's a bad proposition for the general practitioner any way you look at it! It means either a woeful lack of diagnostic ability or a woeful abuse of the confidence placed in the medical profession by those who are sick, either physically or mentally. I have made mistakes in diagnosis; I have been invited by each of two good operators to round up the available operative persons in my vicinity and operate them. One proposition is as distasteful to me as the other, and I hate to make mistakes. Consequently I am still studying diagnosis and still using consultants and specialists in what seems to me a legitimate, decent way. But I will not admit that I am wrong in my diagnosis four times out of five. Neither will I admit that it is right to refer a patient to a surgeon for an operation when that patient does not need it, just because my surgical friend can do laparotomy in almost entire safety. Leaving the money question clear out of the discussion, that is not right. I never have done it and I never will. We all have those chances, chances for easy money of that kind. But the man, medical or surgical, who will abuse a patient's confidence for what there is in it is not worthy of anybody's confidence. Sooner or later doctors who do such things distrust each other. Then comes home the old truism, "you can fool some people all the time, all the people some of the time, but you can't fool all the people all the time." Sooner or later a physician or surgeon has to stand square on his feet and accept the sentence which he has earned among his fellows, and if he does not die too young he usually gets about his just dues.

The fee-splitting proposition does not bother me. I have never received a cent from a consultant, surgical or medical. I try to recognize my own limitations. I try to recognize the rights of the patient and I certainly try to recognize the ability of, and the respect due to, the men to whom I go for consultation. I make it plain to the patient that I shall charge for my own services, that my consultant shall charge for his, and that these charges shall be separate business relations with separate men. I frankly state to the consultant what I consider a fair fee for his services for the individual concerned, and I never have had my statement questioned for a moment. Incidentally, I don't choose tricky men for consultants and I won't stand for them if I know them. If I run across them I know what to do next time. I have consulted with and worked with local surgeons and with some of the best men in Chicago. Sometimes these men have been paid, sometimes they have not. But I have always seen to it that they were paid as generously as possible whenever there was anything to pay them, and if one of these men has not been satisfied he has never, directly or indirectly, mentioned the

fact to me. As to my own compensation, it has been settled on the same basis, but not one cent has come from the consultant.

It is all a question of individual honesty anyhow. There are all kinds of men in the medical profession. The general practitioner who, for any reason whatsoever, is willing to take advantage of the faith and trust reposed in him because he is a physician to advise an operation whether it is needed or not and expect a "rakeoff" from the surgeon can always find a surgeon to "hook up with." The unscrupulous surgeon who prepares himself and poses as a consulting surgeon and will give a third or half of the fee received to the man who brings in the case can always find plenty of men to solicit business for him on that basis. Both these classes of men exist and are to be reckoned with. Meantime the suffering public keeps them both going. I am no "prude" and I have had pretty nearly every ethical theory knocked out of me by this time, but I am sure that a man can be decently honest to the public, to his fellow practitioners and to himself and make a good living in this business—and that is about all most of us do anyhow.

Where is the remedy? I don't know. But there is one element in the medical profession which is usually overlooked in these discussions; the element which may be the foundation for needed reforms and that is the good general practitioner. By this I mean the fairly competent general practitioner, whose number is, thanks to better methods of training and experience, steadily increasing. The establishment of local hospitals and the improvement of sanitary and preventive conditions help make this man a better man every year. He must be a good physician; he is usually a pretty competent obstetrician, who can do a high forceps delivery in a private house with only an anesthetist to help him; he will remove an appendix or a breast with the assistance of his local colleagues, and he is getting a little bigger every day. He is going to be bothered less and less by the troubles that others have over their fee relations, because he is doing more and more work himself. And because he is gradually becoming more competent, the proper position of the beginner, the specialist and the grafter in all classes will be more and more clearly defined. With all due respect to the surgeon this hard-working middle class may yet furnish him the most valuable aid of all. To illustrate, I have a friend and patient whose appendix was removed by Dr. Ochsner in Chicago. Two years' later I removed my friend's hired girl's appendix in our local hospital with the assistance of my consultant here. My patient got well just as promptly as her employer did. But that does not in the least make me as good a surgeon as Dr. Ochsner—to me it simply emphasizes the superiority of the surgeon who has a thousand opportunities to my one, for I recognize my own limitations. When I take him a consultation I try to take it intelligently, and I don't want any of his money. If all the consultations came from men who honestly try to do things themselves just so far as they feel reasonably competent and just as honestly take to the consultant the cases for which they are not competent there might be fewer specialists. But they'd be better specialists, there would be fewer grafters of each class, and there would be fewer funerals at the county's expense. C. B.



## SPLITTING THE FEE.

*To the Editor:*—Dr. Fulham's letter in the November issue of THE JOURNAL should not go unanswered. Therefore, in as brief a time as possible I wish to make a few remarks on the subject. The whole question resolves itself into the fact, Is the "laborer worthy of his hire"? If the physician allowed the surgeon to overcharge his patients then he is at fault. I have not found any surgeon that would not set his charges within the patient's ability to pay. If the surgeon's services are worth what he charges (and who will say they are not) then he is entitled to that amount. When a physician once receives part of the surgeon's fee he is lost, for the very good reason that it is so hard to reform the man or the profession when money is in question. The reference he makes to "other towns' way of doing things" reminds me of the case of a town near his place where the physician referred the patient to the surgeon; the physician collected his and the surgeon's fee and kept both. The physician asking for a part of the surgeon's fee should be in the commission business—he has no place in the profession. The surgeons advising such a thing are the very ones no physician would have operate the second time on a patient of his or himself. They can only get patients through such practice. Had a case of a famous advocate of this practice operate here on a patient of another physician and the way he cut into bowel and tore the mesocolon searching for a sound appendix should damn this commission business forever. DR. J. J. MORONY, Breese, Ill.

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## APPRECIATION OF AMERICAN ORIGINAL WORK ABROAD.

*To the Editor:*—During a recent visit to the clinics of some of the chief cities of England, Scotland, Denmark, Germany and Austria, Dr. Otto Freer of Chicago made numerous demonstrations of his submucous resection of deflections of the nasal septum and was received by the colleagues in his specialty with an intensity of interest in his work which should be most gratifying to Americans. Up to this time American rhinologists have listened to the teachings of distinguished colleagues invited to the United States from abroad to show their methods, but Dr. Freer's experience shows that physicians in foreign countries are quite as willing to give respectful attention to what Americans have to show them provided it be, as Dr. Freer's case, the result of genuine and painstaking original research in clinical or other lines.

Dr. Freer's publications in foreign journals have made him even better known in other countries than in his own, and his method and instrumentarium are winning their way in Europe. A recent editorial in the *Journal of Laryngology, Rhinology and Otology*, published in London, considers Dr. Freer's views at length and is an evidence of the esteem in which his contributions are held in foreign lands.

FLEMING CARROW, Detroit, Mich.

## THE LIMIT; THE PROPRIETARIES.

QUINCY, ILL., Jan. 19, 1909.

*Mr. Editor:*—Commercialism and graft have always been the halting point with the honorable and ethical profession. The patent-medicine man has been fought to a standstill. The pure food law has helped in that. But who may not say that, like the Standard oil octopus or the Phoenix bird, he is rising from his ashes in another form, confronting us almost daily but clothed in the new garb of greater candor. Now candor is a very good thing; but often times the greater the candor the greater the graft. The alphabet is being chopped up and, with the help of imagination, made into new names for new drug combinations, musical and catchy, it is hoped, to the medical profession. Sometimes it represents one, sometimes more of the ingredients, sometimes the therapeutical claims. The claims are always new and superlative. Many of these are truly made, and when known to be so, being very handy, if suitable, there can be no objection to their use. But how are we to know of all these which come now in a flood with our mail almost daily? Moreover, how are we to remember their construction? We must necessarily forget the precise ingredients or propositions in many of them. The disproportion of ingredients to a series of cases, in which the conditions of the invalids vary while the ingredients do not, limits very much the usefulness of these hand-me-down, fit or misfit preparations. Perhaps some of them are as suitable as anything the physician could write for in a given instance or many, and they have the advantage of pharmaceutical preparedness and facility. Of course it is a question of judgment in selecting.

Faith is no further strained in these, where known to be good, than in the former more common practice. We must necessarily forget the precise make-up in many of them. To illustrate, let us take an instance: Suppose that the writer, whose name is Green, were to get up a pain-killer and wished to attach his name to it (for commercial or other reasons), as many of them do—"as a guarantee"—and to have the physician specify *just his*. Let the pain-killer, for instance, contain morphin, hyoscyamin, chamomile, atropin and lactucarium in a syrup, and of proper proportions. It is a pain-killer: *Dolor* is pain, as every physician knows. It is Green's, and *Viride* is Green, and so—happy thought—we will call it *Virdol*.

The physician, we will assume, thinks that is a very good pain-killer; I will remember it. After a few days he is called to see a child in great pain and he thinks of "*Virdol*" as just the remedy, but the exact ingredients and proportions he can not remember. His predicament is thus illustrated, where dependence is put too much on some one else's shotgun. Besides these fantastic names there is a fantastic price for these—"his only"—preparations.

It would seem that a pharmaceutical standard is better and the only one that is golden.

Again: the unsuitable proportions in many of these preparations is most striking and self-condemning, placing the result and physician's

success much in jeopardy. It strains the patient's pocket-book, time and faith and he quits. This, of course, does not apply to the per cent. of them known to be good. The danger is a too careless reliance upon them by the every-day physician.

Reasoning by analogy on the ingredients, as we are asked to do by these proprietors of a new name, and questioning as we have a right to do the fixed quantity and quality, may we not hesitate and ask, "what's the limit; is it really candor, condor or a Phoenix bird?"

II. L. GREEN, M.D.

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## Special Article.

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### A GENERAL PLAN FOR A SCHEDULE OF MEDICAL FEES.

J. N. McCORMACK, M.D.

BOWLING GREEN, KY.

[Reprinted from The Journal A. M. A., Nov. 28, 1908.]

I have long held the opinion that it was feasible to frame a plan for a schedule of medical fees which could easily be modified, as to the amount of the charges and other details, to meet the conditions and needs of almost any county or locality in any section of the country. As the plan I have in mind would be for the information, guidance and benefit of the public quite as much as of the profession, it involves conferences and a full understanding with the people of the community beforehand, as well as the fullest possible publicity afterward, through the public press, placards in each office, and otherwise, the explanatory footnote being made an essential part of every publication.

One of the main difficulties about this in the past has been the almost universal, but wholly erroneous, opinion and insistence on the part of both profession and laity that all the physicians of a community have an equal value and should make the same charge for their services. We know full well, and in a way and to an extent that the people can not, that nothing could be further from the truth. Because of the faulty system of medical education, loose medical laws, and lack of organization and incentives to study, in vogue in this country until recent years, there are regularly licensed physicians in almost every community in the United States, in cities and towns quite as abundantly as in the country districts, who are well paid for all they know or can do for their patrons when they receive anything, and I insist that the time has come for us to deal frankly and openly with each other and the public about this and all other matters of common interest. It is essential to the success of such a plan, too, that we abandon once and forever the antiquated notion of penalties for those who do not live up to the schedule, or black-lists for those who do not pay for services. Such harsh methods are contrary to the spirit and purposes of real organization and, in the very nature of things, can only be productive of misunderstandings and odium.

I have made rate-cutting and cheap doctors a matter of special study in every section of the country for years, and have come to have much sympathy for this class. On getting down to bottom facts, I have always found that they charged less for their services because they honestly knew, better than any one else did or could, that they were worth less than their competitors, and that this was their only chance to obtain or hold practice. There may be exceptions to this, but I have never found one that would bear investigation. They have my sympathy for another reason. As with the division of fees and commissions, contract and lodge practice, the use of proprietaries and nostrums, and similar mistaken practices and policies, all more hurtful to the people than to the profession, the fault is far more with the schools which pretended to educate these men than with them. In fact, without proper instruction about these matters during student life, so as to make it a part of their very being, just as important to the future physician and his patrons as instruction in anatomy or physiology, and sometimes with bad examples from their teachers to start them in the wrong direction, the wonder is that more of them do not do worse. These are just the men who most need the uplifting influences of county societies and postgraduate courses, they are actual entities with which we must live, associate or contend, and with tact and judgment many of them can be made competent. To suspend or expel them is far more of a punishment to their innocent patrons than to them, and it destroys the only chance of reclaiming them.

What is first and most needed in dealing with this class, for their own good as well as of the people, is to raise their earning capacity, to make them better practitioners and better men, by means of consistent, persistent postgraduate study, and by the influence and example of the higher grade members, in every county society and in such intercourse as comes in daily practice, and then in leading them to the adoption of systematic business methods and aiding them in other ways in securing better compensation. If we could substitute common sense plans of co-operation, the ideal of a real community of interests, of practical, kindly helpfulness, such as is common between lawyers, in the place of the habit of fault-finding, jealousy and aloofness which is still as easy to find as it is disgraceful between the physicians of many communities, the difficulties of this entire problem would be reduced to a minimum.

The county societies and postgraduate courses furnish the facilities for doing the scientific and social features of this work. For the business side of it I am advising that the profession in each county or city consider the advisability of arranging for systematic monthly collections, with a carefully selected business representative, and a centrally located "medical collector's office," the collector to be under bond, and on a definite salary, and with authority to appoint as many assistants as may be necessary, for whom he is responsible, very much as sheriffs and city collectors do. The collector should be a man of tact and judgment, he should hold the affairs of each physician as strictly private and confidential, and he should be well paid. This plan should not be tried any-



where until good scientific work is well under way and a spirit of harmony secured, until all of the details have been worked out with the kind of business representatives indicated, and until public sentiment is prepared for it. Even in large cities the plan is worthy of consideration for colony and office buildings, wards or other convenient groups, if it can not be made available for the entire profession. It will not be easy to do these things in any community, in fact, it is never easy to do any important reform work which is worth doing, but with such preparatory work as has been suggested, and with tact and judgment in the earlier steps I am convinced that the plan could be made as pleasant and convenient for the people as it would be helpful and profitable to the profession.

In most parts of the northwest and on the Pacific Coast the rate of charges sanctioned by custom is sufficient to sustain a competent and equipped profession, but in many sections of the eastern, middle and southern states, outside the large centers of population, and for a large part of the profession in them, all except the surgical fees are wholly inadequate, and this is operating to the disadvantage of both the profession and people now in a way unknown to our forbears. This country in recent years has passed through an era of the most remarkable prosperity, but physicians and other professional classes have not shared in it. With the cost of living almost doubled, and the cost of equipment for modern practice quadrupled, the income of medical men, except surgeons and specialists, has remained about stationary. Properly interpreted, poverty in the profession, and the lack of equipment and practical incompetency inseparable from it, is just as important to the public as to us, and the subject should be boldly discussed in public meetings and in the periodicals and daily press until this real, positive danger to the people is a matter of common knowledge. Not only the higher standard of incompetency, but the increased usefulness of the profession in other ways should be made plain. It now probably does more real charity than all the other vocations combined, but the generous support to which it is entitled, and which is demanded by the highest humanitarian interests, would enable it to do a systematic, intelligent, discriminating relief work which is now impossible. To an extent not dreamed of by the laity, or even by many in the higher ranks of the profession, a large per cent. of the physicians in this country, in cities and towns as well as in the rural districts, on account of poverty and the pressing needs of their own families, are daily forced to take what is almost blood-money from a class of widows, teachers and working-women, in their times of affliction, whose incomes are so scanty when well, that it would and should be an honor and a pleasure to make them the special wards and beneficiaries of a properly supported profession.

The opportunity has come to me to study this whole question as no other man probably has ever been able to do. I am giving the results of this broad experience in my public talks every evening, and find, in the lay discussion which follows, that the people can be made to appreciate our difficulties and their dangers quite as readily as can the pro-

fession. In truth, unpleasant as is the admission, the trouble is with us and not with the public, as is true in regard to almost every other evil from which we suffer. If the physicians competing for the same practice in every section of the United States could really get together in all these matters, and then take the people into their confidence, the balance would be comparatively easy, as there are not enough of them to do the practice if every patient was given the time, and the kind of scientific examination and treatment, to which they are entitled.

For many reasons, any schedule intended for general adoption should cover only the ordinary fees for general practitioners and non-operative office work. Surgical fees are usually the subject of special arrangement, and, anyway, they vary to such an extent that an attempt to include them would give the public an exaggerated and misleading notion of what is received by the ordinary surgeon, or by any of them except under extraordinary circumstances, and would do more harm than good. As a rule, too, surgeons and specialists are better paid and are well able to take care of themselves. Besides, my experience has convinced me that it is in the field of general and office practice, with the hard-worked and underpaid ordinary practitioners, that the pressing need for reform exists.

For obvious reasons the schedule should be adopted by the profession as a whole, or as individuals, and not by the county society. The provision in the by-laws forbidding such action by the societies was inserted after careful consideration, was certainly wise under the conditions then and still existing, and probably should be permanently retained. The membership in most societies embraces only from one-half to three-fourths of the physicians of the county. While it is probable that all, including the former sectarians, will finally come in, this will be the work of years, and although not absolutely essential, it is important that the schedule be agreed to practically by all of the active physicians of the jurisdiction, whether members or not. Besides, this has been one of the most fruitful sources of discord in societies in the past, often provoked by those who took least interest in the scientific proceedings.

With all the foregoing considerations in mind, and after the matter has been fully discussed with the people, the schedule and footnote, in their main features, are suggested only as the basis for discussion. The rate of charges will seem too high for some sections and entirely too low for others. I am proposing about what, in my judgment, would be fair and equitable at the present cost of living and equipment in the central, middle, western and southern states, but, of course, the exact fees and other details must be arranged for each community in accordance with what is deemed just and proper. The rates should not be too hard and fixed. There are people of moderate circumstances in almost every community, factory operatives and others, who ought to pay something, and yet should not pay full fees, and a wise discretion on this and similar points must be provided for in any plan which is to be comprehensive and successful.

The order of arrangement and the items of practice included are as seems best suited for most counties and communities, but the purpose is to make it so simple and flexible that it can be altered to suit varying conditions and views. For instance, if it is thought best, fees for fractures and dislocations, or any other surgical or special work, can be easily added. It will be noted that a broad distinction is made between ordinary and complete office examinations, including a thorough examination of the chest, urinalysis and other like work involving extra time and skill. My own opinion is that a double charge should be made for night practice for well-to-do people, but I have yielded to the views of others on this point. Telephone practice is so annoying, exacting and unsatisfactory that it certainly should be paid for except where regular visits are being made, and in all cases after bed-time. Consultations are purposely made low in order to develop and encourage this variety of practice.

The form of schedule suggested and the footnote, as they should go on the placard, are as follows:

#### SCHEDULE OF MEDICAL FEES FOR ——— COUNTY.

1. Day visit in town.....	\$2.00
2. Night visit in town.....	3.00
3. Day visit in country, first mile, \$2.00; each after mile, one way....	1.00
4. Night visit in country, first mile, \$3.00; each after mile, one way....	1.50
5. Ordinary office examination and advice.....	1.00
6. Complete examination and advice.....	5.00
7. Advice or prescription by telephone.....	1.00
8. Obstetric case, uncomplicated, not over 6 hours.....	15.00
9. Life insurance examinations.....	5.00
10. Consultation, double ordinary visit.	
11. Surgical and other special fees as may be arranged.	

#### EXPLANATORY NOTE.

This schedule of fees is purely advisory. It is arranged and published for the information and guidance equally of the profession and people. It is intended to suggest the fees for ordinary services by competent physicians, for these fully able to pay their bills. It in no way applies to practice for the deserving poor, of which all agree to do their full part. It may be that physicians who are less competent will feel that they should charge less for their services. This is recognized as just, and to do so will in no way affect either their society membership or professional standing. It is especially important that these less fortunate members should have the benefit of the postgraduate study courses and other scientific work of the county society, which are free to all, for their own good as well as that of their patrons, and regular attendance at these meetings should be made a condition of continued employment. Night fees are made higher for many reasons, but more especially to give time for such study and society work as is essential in keeping a physician competent to practice with safety to the people.

For the convenience and benefit of both the profession and its patrons, systematic monthly collections, in so far as possible, are requested in the future. It is believed that it will be more satisfactory to families to settle their accounts while they are small, and while they remember and are grateful for the services, and it will enable physicians to keep equipped for far better service.

## COUNTY AND DISTRICT SOCIETIES

### ADAMS COUNTY.

The Adams County Medical Society met Jan. 11, 1909, in the Elks' clubrooms, with the new president, Dr. Henry Hart, in the chair. Others present were Drs. Pendleton, Christie, Jr., Koch, Robbins, Rice, Pitman, Gilliland, Ashton, Gabriel, Williams, W. W. and J. G., Ericson, Knox, Haxel and Wells. The president announced his committees for the year as follows: Program, Drs. Wells, Baker and Koch; Legislative, Drs. Johnston, W. W. Williams and Grimes; Social, Drs. Kirk Shawgo, Ericson and Collins. The most comfortable Elks' hall was secured for the society's meetings for the year 1909. Dr. J. A. Koch, a delegate to the recent Tuberculosis Congress at Washington, made a fine report of the sessions, and his report was requested to be published in the State JOURNAL. The communication from the Bureau of the Census relative to the importance of vital statistics was read and specifically endorsed by resolution to our representatives in the state legislature, and referred to the county legislative committee. A resolution of thanks was passed to Drs. Abby Fox-Rooney and Henry M. Rooney, wife and son of the late Dr. Michael Rooney, for a fine gift of medical books from the library of the latter. Miss Mary C. Wheeler, superintendent of Blessing Hospital, by invitation, addressed the society on the subject of "The Visiting Nurse." The society heartily endorsed the movement looking towards the inauguration of that special line of nursing in this city. Adjournment to Hotel Necomb for luncheon, after which came the Symposium on Influenza, with Dr. Walter Wessels, Mendon, discussing the etiology and pathology; Dr. Ray Mercer (whose paper was read by the secretary), Loraine, dealing with the symptoms and complications, and Dr. J. M. Grimes, Coatsburg, taking the treatment of the disease. The symposium aroused animated and general discussion.

CLARENCE A. WELLS, Secretary.

### BI-COUNTY (IROQUOIS-FORD).

The fifth annual meeting of the Bi-County (Iroquois-Ford) Medical Society was held at Watseka, Ill., on Tuesday, December 1, 1908.

After dining together at the Iroquois House all repaired to the Court House, where Judge Gillen had kindly tendered the society the use of his court room. Order was called by the president, Dr. T. N. Boue. The minutes of last meeting were read and approved, and the regular business of the session transacted. The following were then elected officers for the ensuing year: President, Dr. J. Y. Shamel, of Gibson City; vice-president, Dr. Horace Gibson, of Sheldon; secretary-treasurer, Dr. Robert Lumley, of Watseka; censor, Dr. D. W. Miller, of Gilman. The following resolutions were then presented and unanimously adopted:

"Since our last annual meeting two of our charter members have been summoned by the grim Angel whose mandate of arrest none may resist. We miss their genial presence and cheery greetings: but we look and long for them in vain. They have laid down life's burdens, duties and responsibilities, and passed into the unknown realm of Silence, whence no traveler e'er returns.

"Samuel Dauphin Culbertson was born in 1839, and early inclined toward a medical career, but when his country needed all her loyal sons to save the Union patriotism proved a stronger lure than ambition, and he enlisted in the ranks of Company F, 150th Pennsylvania Volunteer Infantry, which was speedily sent to the front. His left shoulder shattered by a rifle ball at Fredericksburg, and utterly incapacitated for further service by rheumatism and scurvy (from the after-effects of which he never entirely recovered), he was honorably discharged,



Then, though still sick, suffering and wasted almost to a skeleton, he entered Jefferson Medical College, from which he graduated in 1866. After some years spent practicing in his native state he moved to Illinois, where he was licensed to practice in 1878. Modest and unassuming manners, united to perseverance as a student, won him real worth as a practitioner, and gained for him the confidence and esteem of his colleagues. That he retained their respect and good will is obvious when we remember that last year he was president of this society and was a member of the Illinois State Medical Society and the American Medical Association at the time of his death. He happily was able to participate actively in life's affairs until the last. His final illness (pneumonia) was inaugurated by a chill which occurred while making a country call but a few days before he died. In feeling and character Dr. Culbertson belonged to a class of physicians said to be now passing rapidly away. He was of the type to which Watson paid such touching and merited tribute in "Dr. MacClure," and of whom Stephenson, who knew whereof he spoke, truly said: "The physician is the flower (such as it is) of our civilization; and when this stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race."

"Leonard R. McIntyre was born in 1868. After the usual preparatory studies he entered the University of Nebraska College of Medicine, from which he graduated in 1897. He immediately located in Illinois, and was licensed to practice in this state shortly after his graduation. Genial, popular and active in the profession, he was one of those who helped to organize this society, of which he has been a highly esteemed member throughout its entire history. We, his colleagues, who knew him so well, learned of his untimely taking off with real regret, and mourn him with sincere sorrow."

The scientific part of the program was a symposium on "Blood Poisoning," divided as follows: "Sepsis Arising During Parturition," by Dr. Horace Gibson; "Sepsis Following Wounds," by Dr. N. H. Kern; "Sepsis Due to Other Causes," by Dr. G. W. Ross. Each of the papers was up to date, and showed broad reading, experience and reflection. The discussion which followed was general, animated, instructive and interesting.

ROBERT LUMLEY, Secretary.

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#### CLARK COUNTY.

The Clark County Medical Society met in regular monthly meeting in Dr. Burnside's office, at 3 p. m., Wednesday, Jan. 6, 1909. Members present: Mitchell, Burnside and L. J. Weir. Dr. Mitchell quizzed on "Anatomy and Physiology of the Kidneys," presenting the subject in detail in a thorough and entertaining manner. Dr. Rowland being absent, Dr. Weir presented the subject, "Acute Nephritis, Etiology, Symptoms and Treatment." Society adjourned, all agreeing it was one of the most interesting and profitable meetings ever held.

L. J. WEIR, Secretary.

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#### COLES COUNTY.

A meeting of the Coles County Medical Society was held Tuesday, Jan. 5, 1909, at 8 p. m., at the Charleston Public Library, Charleston, Ill. The following program was given: "Fistulous Tracts, Tuberculous, Sinus and Abscess Cavities; New Method and Treatment," Dr. A. T. Summers; discussed by Drs. Bell, McDonald and Fry. "The Use of Digitalis in Heart Diseases," Dr. J. B. Baker; discussed by Drs. Ikanayan, Alexander and Bennett. President's address, Dr. T. O. Freeman; election of officers; luncheon; "Ethical Side of the Medical Profession," Dr. J. T. Montgomery.

The following officers were elected for the ensuing year: President, Dr. Cleaves Bennett, Mattoon; vice-president, Dr. G. B. Dudley, Charleston; secretary-treasurer, Dr. R. H. Craig, Charleston; censor, Dr. J. W. Carter, Mattoon.

## COOK COUNTY.

## CHICAGO MEDICAL SOCIETY.

*Regular Meeting, held Nov. 25, 1908.*

A regular (clinical) meeting was held November 25, 1908, with the president, Dr. Alfred C. Cotton, in the chair. Dr. Victor J. Baccus reported and exhibited the following cases: (a) Nephrectomy for a hypernephroma of left kidney; (b) partial cystectomy for carcinoma of the bladder; (c) Gunshot wound of the right knee joint, with division of the right external popliteal nerve, drainage of knee joints, suturing of nerves, recovery of motion in joint, and beginning evidence of nerve regeneration; (d) Dupuytren's contraction. Dr. William Hessert reported two cases and exhibited the patients, one of acute tetanus and the other a case of arthroplasty of the elbow joint. Dr. Cassius C. Rogers reported a case of multiple cysts of the brain and exhibited the patient. The various cases were discussed by R. H. Good, Max Reichmann, William Fuller, Gustav Kolischer, A. J. Ochsner, Carl Beck, A. P. Heineck, M. R. Barker, and the discussion closed by Dr. Rogers.

## DISCUSSION ON THE CASES OF DRS. BACCUS, HESSERT AND ROGERS.\*

Dr. R. H. Good:—On April 24, last year, I was called in consultation in this case at the Frances Willard Hospital. The patient complained of very severe headache and of excruciating pain in the region of the right frontal sinus at its inner angle. She had this pain so severe that when I made percussion over the frontal sinus it increased in intensity, and making pressure anywhere over the frontal sinus or over the supraorbital region would aggravate the pain. The pain radiated to the mastoid region, which is frequently the case in frontal sinusitis. Bending over to pick something up would cause increased pain in the frontal sinus. Sneezing or blowing the nose increased the pain in the sinus. There was ptosis of the right upper lid, the patient being able to open the right eye but slightly. There was paresis of the superior rectus, inferior rectus, and internal rectus, showing involvement of the third nerve. The pupil was dilated considerably and only reacted slightly to light. When asked to look towards the left the left eye would move over, but the right would only move partly. When asked to look up, the right eye would move partly, and the same way in looking downward.

On examination of the nose I found a marked deflection of the septum to the right in the region of the middle turbinate pressing directly against the middle turbinate. The middle turbinate was somewhat enlarged. On further examination I found a little mucus in the middle meatus; I could not see any pus at this time. The *x*-ray shows a marked darkness over the right frontal sinus, as is seen in the *x*-ray picture. Transillumination with Freer's lamp revealed a considerable shadow over the right frontal sinus. At this examination I endeavored to cocaineize the middle meatus and middle turbinate thoroughly with adrenalin chlorid and cocaine, thinking that this would allow drainage to be established and the symptoms to subside; but the patient suffered just as much after this treatment as before, and, in fact, spent an uncomfortable night, so that the next day I was obliged to do something. I then performed my frontal sinus operation by the intranasal method under local anesthesia, and that same night the patient slept better than she had for six weeks. Usually, however, after cocaine anesthesia, such patients do not sleep so well for the first night. She was entirely relieved of the pain after the operation, and since then there has been no recurrence of it. Then next day after the operation the ptosis was gone. Both eyes opened. The muscular action did not resume its proper function until a week later, when she lost the diplopia she previously had. The pupil did not return to its normal size. I have not seen this patient for months, but I see the pupil tonight is normal. Two weeks after operation vision in this eye, with proper cor-

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\*For text of papers see page 178.

rection of glasses, was normal, whereas before the operation the patient tells me that the vision was not normal. The patient being in the hospital I was unable to make an accurate visual test. (Here Dr. Good illustrated his intranasal method of operating).

Three and a half weeks following this operation she returned to the hospital and I found some edema above and below the canthus of the right eye. There was tenderness on pressure in this region and pain between the two eyes; she had a temperature of 100°. I curetted the anterior ethmoidal cells and the pain subsided immediately after that operation, and since then, so far as I know, she has had no symptoms whatever of either frontal sinusitis or ethmoiditis, her pains being located elsewhere. There was a discharge in this case for about two or three weeks after the operation, but when I examined her about six months ago this discharge had ceased. I do not think that this frontal sinusitis was caused by the cysts in the brain.

Dr. Max Reichmann:—Dr. Baceus tells us about the skiagrapher making a diagnosis of enlarged kidney in the case he has reported. Such a diagnosis is quite an achievement in the art of radiography, and it can be made on the left side, where there is no liver, or where there is no dense tissue covering the kidney, and also if the intestines are perfectly empty.

In the last four weeks I had occasion to make some roentgenograms for different members of the society, and in three or four instances I was able to make a diagnosis of tumor of the left kidney which afterwards was proven to be correct by operation.

If I am permitted, Mr. President, I would like to make a remark with reference to the case of Dr. Rogers. I am very sorry that the Roentgen rays were not used in that case, because cysts of the brain can be diagnosed with almost absolute certainty by the Roentgenologist. The density of the cyst and the density of the brain tissue are so different that shadows are perceptible.

Dr. William Fuller:—The diagnosis of hypernephroma is not only a difficult matter before its removal but is not always easy to recognize after its removal. It is not alone necessary to learn the nature of such a tumor before operative interference is resorted to, but we should determine always the presence or absence of secondary deposits before any radical treatment is instituted.

Hypernephroma is a tumor that is prone to metastasis, and I think in a suspected case of this kind that sensations of pain or discomfort in other parts of the body, should be looked upon with suspicion. It is in the long bones particularly, as well as in the lungs, liver and intestines, that secondary deposits are found, and when symptoms are present indicating trouble in these organs it is the surgeon's duty to rule out a metastasis here before any operation is performed.

The microscopic diagnosis of perfectly typical tumors of the kind under discussion is, of course, not difficult, but many such tumors are not typical and are frequently so entirely unlike the hypernephroma ordinarily seen, both macroscopically and microscopically, that in order to reach a diagnosis it requires prolonged study of the tumor by a skilled pathologist. The best example of this kind of tumor is the so-called lipomatoid hypernephroma, a very typical one of which was recently reported by Dr. Holmes and which was examined by Dr. Wells. In this instance more than half of the tumor was sectioned before sufficient evidence was obtained to correctly name this tumor.

I would say a word further with reference to the measure or means of determining the presence of the other kidney when about to do a nephrectomy. Dr. Baceus referred, if I understood him, to the practice of transperitoneal exploration for the purpose of settling this point, and mentioned the ease with which it could be done. Extraperitoneal incisions should, I think, always be preferred to intraperitoneal incisions, especially when information about the kidney is desired. There is more or less danger under any and all circumstances of infecting the peritoneal cavity when it is opened, and the incision behind or in the loin of the

other side obviates this danger, and, as has been stated by several, especially Andrews, affords ready and satisfactory information of the presence of the healthy kidney.

Dr. Gustav Kolischer:—I would like to say a few words with reference to the tests for determining the functional capacity of the kidney. I think the skepticism displayed by Dr. Baccus in relation to tests for determining the functional capacity of the kidney is very justified, as there seems to be an idea that we are in a position to determine positively whether a kidney is insufficient or not, and that if the diseased one is removed, and the other is insufficient, the patient will die. There is no such method which can do that for us. All the methods of testing the functional capacity of the kidneys are reliable only in one sense, and that is in a positive sense. The phloridzin test is neither reliable in a positive nor negative sense. All other tests, whether based on the skill of the clinician, the density of the staining in the urine, if indigo-carmin is used, or another drug, or the time after which the staining drug will appear in the urine, are reliable in a positive sense only. This was first shown by Rovsing. An error which Casper and his followers made was this, that if functional tests showed the other kidney was insufficient, then they did not operate for the removal of the diseased kidney, consequently the tests as carried out by them were not reliable. Rovsing operated successfully on cases in which one kidney was diseased and the other determined to be insufficient.

Dr. Louis Schmidt and I determined tuberculosis of a kidney, and by the known tests its mate at the time appearing insufficient, and yet, after Dr. Bayard Holmes removed the tubercular kidney, the patient recovered, the other kidney resuming its normal function.

As to the diagnosis of tumors of the kidney, the use of the cystoscope is of value. There is one thing which is rather surprising to me, and that is in a great many tumors—hypernephroma, for instance—even if they do not break through the capsule or break into the parenchyma, we may still find a hemorrhage. Why I do not know, but it is difficult to explain. There is one symptom which will lead to suspicion in the early stages, that is, if there is any disease of the kidney, whether there is a pelvic stone, or a small tumor of the pelvis of the kidney, or whether there is a malignant tumor, even if it does not yet break through the capsule, the respective ureteral opening is changed in appearance.

So far as tumor of the bladder is concerned, I am glad that our method was spoken of by Dr. Baccus as feasible, and I think it is preferable to the one revived by the Mayo brothers. It was proposed years ago by Rydygier to operate intraperitoneally. We do not get any more access by this method and we expose the peritoneum to the danger of infection.

Dr. A. J. Ochsner:—I wish to refer to one or two practical points made by Dr. Baccus, one in regard to the operation for Dupuytren's contraction. The result in this case is beautiful. Those of us who have had much experience in operating upon these hands know that until very recently the results have rarely been as satisfactory as the result in this case, and the reason why this result is so perfect is because the entire contracted fascia was removed, in the first place, without regard to the skin; then the lost skin was replaced by healthy skin from the posterior surface of the little finger. That is a very important point in securing good results. The little finger had no value because, as I understand, the contracture had extended to the palmar surface of the finger; that finger was consequently in a hopeless condition, unless one could possibly have succeeded in saving it by first removing all of the contracted tissue and then using the old method of Salzer of making transplantation by inserting a finger under the flap, and getting thick skin to cover over the finger in that way. But the results even then are not nearly so satisfactory as in this case, where you get an excellent piece of skin from the posterior surface, which is perfectly normal. In that way the skin overlying the contracted fascia which is implicated does not have to be regarded.

Regarding the case of nerve suture, I wish to bring out a point which has only recently been referred to in the literature, and which some of the surgeons



here may not have encountered as yet. In suturing the nerves, as in this case, it was not necessary to make use of this method because the nerve was severed by means of a bullet. If it had been shot off the same point with a charge of bird shot, so that a large portion of the nerve would have been destroyed, this method might have come into play. But it is worth mentioning. The method consists in making a suture at a distance in the usual manner by carrying five strands of chromicized catgut from end to end and enclosing these catgut strands together with both ends of the severed nerve in the lumen of a piece of vein. The long saphenous vein should be chosen if the injury is in the location where it was in this case. This vein is cut out and the sutures are passed through the vein, and the vein is drawn like a tube over the whole space that has been sutured at a distance, and then when these sutures are tied, the vein, which has been kept over the center of the sutures, is simply stretched over the ends and there attached by means of a few small catgut sutures, so that we have the ends of the severed nerve connected by means of the ordinary catgut sutures, giving the axis cylinders direction and to have the entire area enclosed in a piece of the patient's own vein, so that we again produce a condition similar to the condition we have when we remove the nerve from the canal in the lower jaw. In a few months that nerve grows again, extends through the canal, and becomes attached again. So we have here a method of nerve suturing which seems to be better than the decalcified bone method, the fascia method, or any of the methods that have been in vogue for a long time.

Dr. Carl Beck:—I would like to make a few remarks in regard to the cases reported by Dr. Baecus.

The case of hypernephroma is one that interests us all, and as to the clinical way of testing the functional capacity of the other kidney, Dr. Baecus mentioned a case in which I at one time left a kidney for a number of days outside of the body in order to test the value of the other kidney, without resorting to a laparotomy or any method of exploration. The same method has been used by Casper, as he mentioned, only that in such a quick way, as Casper himself wanted to show, the kidney will not answer in every instance, and it will be difficult to make a positive test. You can leave the kidney outside of the body, as I have left it, for eight days. You can leave it for a number of days longer, and then be sure about the functional capacity of the other kidney; but in case there is no other kidney, or there is insufficiency of the other kidney, the kidney which contains some secreting substance can be replaced safely when the other is removed, as I did in the case that has been referred to. Dr. Baecus did not mention what Dr. Kolischer has alluded to, that is, the second kidney sometimes, after removal of the other kidney, gains in functional capacity. Such a gain was noticeable in my case, so that the test is valuable if any one wants to use it.

There are a number of clinical tests which have been very well studied by a number of surgeons and practiced, but none of them is exactly reliable in one sense.

I would like to say a word or two with reference to the case of Dr. Rogers of multiple cysts of the brain. Cysts of the brain are in most cases of traumatic origin. It is to be regretted that Dr. Rogers did not remove some of the contents of these cysts, so that we can examine the material microscopically, since multiple brain cysts are very rare. Unilocular or multilocular cysts of the brain are almost entirely of traumatic origin, that is, a hematoma is gradually transformed into a cyst. They are the easiest and most gratifying tumors of the brain to operate on, and, as Dr. Reichmann has said, they can be detected by the *x*-ray, if of any size, and the diagnosis made.

About eight or nine years ago I exhibited before this society a cyst of the brain of the size of an egg, which I had removed, and which Professor Klebs at that time examined, and found that the cyst was of traumatic origin, formed around a hematoma, the result of a fall from a certain height. The case occurred in a little girl.

It is also regrettable that Dr. Wilder, who examined the eyes of this woman, is not here to give us the results of his examination, because undoubtedly the eye findings would be very interesting, as bearing on the etiology, and it would be very important if this case was a little further examined as to its etiology.

Dr. Victor J. Baceus:—I wish to thank the members who have discussed the papers I have reported and presented, and especially Dr. Kolischer for his remarks with reference to these functional tests in speaking of the case of hyper-nephroma, as he has explained them more clearly than I could have done.

In regard to the case of gunshot wound of the right knee joint, I will say that in some of these cases, when the nerve has to be sutured at a distance, some one has suggested the use of desiccated artery obtained from animals, that is, desiccating the artery and introducing it into the ends, forming a tunnel for the ends of the nerve. I believe this would be a better method, because we are using tissue from a human subject, and the autoplasmic method is better than the heteroplasmic.

As to the case of Dupuytren's contraction, the incision was made along the inner surface of the palm of the hand, in order to avoid making a new scar in the already contracted skin; therefore, we had partial sloughing of the skin, on account of the dissection at first, which I thought was limited to two fingers, but after the skin was opened it was seen that the fascia extended not only to the ring finger but also to the other two fingers, and I dissected the entire area from the palmar fascia, and in doing so the inner margin sloughed to about the size you see. Furthermore, the finger at the proximal joint was so ankylosed, or so interfered with by its position that we could not effect apposition, and so we replaced the skin lost in the palm by amputation of the finger and utilized it.

Dr. A. P. Heineck:—In tetanus we have an acute infectious disease which, in all of its different clinical forms, has a frightful mortality. There are still many points concerning our knowledge of this disease that demand elucidation. Since the discovery in 1884, by Nicolaier, of the bacillus tetani and its cultivation, in pure cultures, in 1889, by Kitasato, the exciting agent of all cases of tetanus is known. For all the different clinical forms of the disease (head tetanus, tetanus neonatorum, puerperal tetanus, postoperative tetanus, traumatic tetanus, etc.) we recognize only one exciting factor, the tetanus bacillus. Furthermore, we know that the disease has a variable period of incubation, the average period being from five to ten days. It has been clinically observed that the shorter the period of incubation the greater the probability of a fatal termination. The disease has no specific pathological anatomy. In some of the cases marked congestion of the cerebrospinal nervous system has been found, with or without a marked hyperemia and thickening of the pia mater, etc. No constant changes have been found in the peripheral nerves. Such findings as we have in some cases of tetanus are not characteristic. They occur in other infectious diseases, and it must not be forgotten that in some of the cases that have come to the autopsy table the findings were negative.

With the many different forms of treatment, and probably despite them, some cases have terminated in recovery. I always feel like congratulating a surgeon who carries a case of tetanus to a successful issue.

Of the many medicinal agents that have so far been employed in this disease, all have been used to meet indications symptomatically. Opium and its alkaloids, calabar bean, eurare, carbolic acid, cannabis indica, the bromids and chloral (the latter especially have been recommended), all have been successfully employed in some cases. James Stewart says: "Of no drug can it be said that it has a marked effect for good in severe cases, and as recovery follows all possible modes of treatment in mild attacks, it is natural to conclude that the drug treatment of tetanus is far from satisfactory."

The antitetanus treatment, though successful in the lower animals, is, when employed in the human being, of very doubtful efficacy as a curative agent. Most clinicians have lost faith in it. Antitetanic serum has been injected subcutaneously, intramuscularly, intravenously, intraneurally, intracerebrally and intra-

spinally. The results have been discouraging; they have so often been disappointing that most clinicians have lost faith in this agent as a cure for tetanus.

I do not dispute that it is wise to give it as a prophylactic measure in wounds concerning which one is apprehensive of tetanus infection. It has been my practice in all Fourth of July wounds, in all wounds contaminated by street dirt, in all punctured wounds of a suspicious nature, to inject subcutaneously, for prophylactic purposes, 10 to 20 cubic centimeters of antitetanus serum. I have never seen a case of tetanus develop after the prophylactic employment of antitetanus serum. Therefore, it is with a conviction that I urge the employment of antitetanus serum as a beneficent protective measure. An early vigorous and thorough antiseptic treatment of the wound must never be omitted.

I know that Paul Reynier, *Bulletin et Mem. de la Societe de Chir. de Paris*, 1907, Vol. 33, page 85, has succeeded in collecting from the literature thirty-two cases of tetanus that have developed after attempted immunization with antitetanus serum. These cases are not recorded enough in detail to shake my clinical conviction as to the great value of this serum as a prophylactic agent.

Although the solution of magnesium sulphate has been previously employed to combat established tetanus infection, yet when successfully employed by a clinician of Dr. Hesser's standing in the surgical world it commands consideration.

Joseph A. Blake, Margan Franke and G. Canby Robinson have each employed this agent in the treatment of tetanus and have employed it with success. I myself have dismissed this very afternoon from the West Side Hospital a case of acute tetanus, the recovery of which I feel inclined to attribute to the employment of magnesium sulphate. In my case, a robust young man, 17 years of age, the infection developed seven days after stepping upon a rusty horseshoe nail.

At the time of his admission to the hospital, Oct. 22, 1908, the wound of the foot, the portal of infection, was completely healed. The manifestations of the disease were so classical that a diagnosis was self-evident. There was lockjaw, opisthotonus, rigidity of the thoracic and abdominal muscles, etc.

In this case I injected, on five different occasions, 5 cubic centimeters of a 25 per cent. solution of magnesium sulphate, filtered and sterilized. The injections were all made into the spinal subarachnoidal space. Each injection was followed by a marked lessening of the muscular rigidity and a general improvement of symptoms. This general betterment would last about a day. The technique of these injections is easy, being that of a lumbar puncture. All the injections were made through the interspace between the spinous processes of the fourth and fifth lumbar vertebræ, making as a landmark an imaginary horizontal line connecting the highest points of the crests of the ilia. The intraspinal injections of magnesium sulphate solution were made on Oct. 23, Oct. 25, Oct. 26, Oct. 28, Oct. 30.

Owing to the muscular rigidity existing in this patient, the injections had to be made with the patient lying in the right lateral recumbent posture. No anæsthetic was used and none is necessary.

In addition to the above, on the day of admission of the patient, the 22d, he was given 7,500 units of autitetanus serum, 4,500 units in the spinal subarachnoidal space, 1,500 units around the left sciatic nerve (point of inoculation being the left foot) and 1,500 units subcutaneously. On the 23d he was given 7,500 units subcutaneously, on the 24th he was given 6,000 units subcutaneously, and on the 25th and 26th each 6,000 units into the spinal cord, 1,500 units into the left foot and 1,500 units in the left sciatic nerve; on the 28th 1,500 units into the spinal cord, 1,500 into the left sciatic nerve and 1,500 into the left foot; on the 30th he was given 6,000 units into the spinal cord and 3,000 units subcutaneously.

The patient left the hospital in less than a month after admission, having fully recovered. I must add that in the active course of the disease he was obstinately constipated and that during the first week he had to be catheterized. The constipation was overcome on several occasions by subcutaneous employment of physostigmine, in doses of 1/100 gr., as in the first few days the firm locking of the jaws prevented the giving of cathartics by mouth.

As to Dr. Baccus' case of nerve division through a gunshot wound, we can state that it is now an established principle that, when feasible, the restoration of continuity of divided nerves must be attempted. For the restoration of continuity of divided nerves we have recourse to primary or secondary nerve suturing. The former, it has been clinically noted, gives the best results. So we will accept as an established principle that in all cases of traumatic nerve division the proximal and peripheral ends of the nerves should be united. For the restoration of function this reunion of the divided ends is essential. In all fractures, be they open or subcutaneous, it is important that the medical attendant determine, among other facts, the presence or absence of coexisting nerve division. He does this by testing for disturbances of sensation and motility. Failure to do this is liable to place one in an embarrassing position. For instance, at the Cook County Hospital, we have had several cases of fracture of the arm that have applied to the institution about six weeks after the accident. The bone had united but there was existent a musculo-spiral paralysis. We could not tell, owing to the insufficient data at hand, whether this paralysis was a compression paralysis or a division paralysis; that is, whether it was due to the compression of the musculo-spiral by or to inclusion in the callus, or whether the same violence which fractured the bone had at the same time divided the nerve.

The therapeutic indications in these two conditions are different. If the paralysis be due to nerve compression, expectancy for a period is permissible. Some of the excessive callus may be absorbed and recovery may take place without operative intervention. If the paralysis be due to nerve division, then delay is detrimental to the patient; it jeopardizes ultimate functional recovery. The indication in all cases in which the nerve has been completely divided (that is, in mixed nerves of sufficient functional importance), is operative intervention to re-establish the continuity of that nerve. Failure to do so entails permanent motor and sensory disability. I have now under my care at the Cook County Hospital a healed compound fracture which involved the elbow joint. It was a separation of the lower humeral epiphyseal cartilage. The patient has recovered from the fracture. Through an oversight at the time of admission to the institution and also partly owing to the fact that it was not at that time believed that the arm could be saved, it was not noted whether any of the important nerves of the arm had been divided. There is now a complete paralysis of all the muscles of the forearm that are innervated by the musculo-spiral nerve. What is that paralysis due to? Is it a compression paralysis or is it a division paralysis? We have not yet determined. We are treating the case expectantly. If improvement does not start in early, then I will have to intervene by operation to determine and correct the condition.

About three years ago I had at the Samaritan Hospital a case somewhat similar to the case reported by Dr. Baccus this evening. This case worried me somewhat. It was a gunshot wound of the thigh in which the bullet had lodged in the tissues. There was profuse hemorrhage, the source of which was a wound of the superficial femoral artery. This called for exposure of the vessel at the bleeding point. The proximal and the distal end were ligated. Upon exploration it was seen that the bullet was embedded in the sciatic nerve. I removed the bullet. Bullets, if they be accessible, whether they cause disturbance or not, should be removed. About ten days after ligation of the superficial femoral artery, there was a secondary hemorrhage. It was partly interstitial, partly external. I was under the impression that the hemorrhage came from the superficial femoral, but upon exploration I found that the blood came from the deep femoral, which latter vessel I ligated. A severe inflammation continued for some time and then a secondary hemorrhage occurred from the superficial femoral. This I controlled by ligating the common femoral. The patient ultimately recovered with only slight limitation of function, which limitation was due to the destruction of the muscular tissues by the long continued suppurative process. He has now recovered entirely. The interesting feature of that case was that, despite the fact that I ligated the common, the superficial and the deep femoral arteries, the nutrition of the limb has not been interfered with. The impact of



the bullet against, and its subsequent lodgment in, the sciatic nerve was not followed by permanent paralysis. This case did not require nerve suturing because there was not a complete nerve division. It was a separation of some of its fibres and a division of others and not a complete division of the nerve.

Dr. M. R. Barker:—It seems to me we should not allow Dr. Hessert's paper concerning arthroplasty of the elbow joint to pass without discussion. I think we should congratulate Dr. Hessert upon the manner in which he managed this case. There is no class of cases, excepting those of malignant disease, or perhaps operations upon the central nervous system, that I approach with more anxiety for end results than those of chronic ankylosis of joints, regardless of the etiological factors that have caused them. Especially is this true if the procedure inaugurated has for its object the restoration of joint function. I believe, however, that when the condition is due to fracture, especially in the young, that these cases offer by far the best prognosis, because the tissues about and within the joint are not devitalized by diseased conditions.

It has become my practice in the last year or two, in cases of chronic ankylosis of the elbow joint caused by disease, for instance, chronic rheumatism, or arthritis deformans, etc., when contracture is present, as it usually is, and the forearm is in about this position (indicating) or at about a right angle to the arm and the shoulder joint is normal, to advise against operative procedures. Of course, these cases nearly always occur in older subjects. We may, in attempting to remedy an ankylosis of the elbow joint, when in the position mentioned, do more harm than good by reason of the danger that exists of getting a loose or flail-like joint, rather than restoring function in the joint. I am always skeptical about restoring function, in chronic ankylosis of joints, due to disease. There are many cases, however, of chronic ankylosis of joints due to disease, for instance, the knee joint, where we may do a resection for the purpose of making a useful limb, that we may approach with great confidence of success. These cases, however, are entirely different from attempting restoration of joint function. I am grateful to Dr. Hessert for presenting this case.

Dr. Cassius C. Rogers (closing the discussion):—Just a word with regard to the x-ray picture. The picture was taken a year before the patient was operated on for brain cysts. It was not taken for the brain trouble, but for frontal sinus disease.

As to the etiology, which was referred to by Dr. Beck, I have no doubt it was an intradural hemorrhage. She had the symptoms of intradural hemorrhage, but not localized, tingling sensations, etc. In intradural hemorrhage we do not have pressure like we do in extradural hemorrhage; it spreads over a greater area. In a case recently observed there were violent contractions of both legs and both hands, with twitching of the face. This case was sent to me about two months ago, in which I made a diagnosis of intradural hemorrhage, opened up the dura, and the patient got well. We have not a complete paralysis in cases of intradural hemorrhage like we have in extradural hemorrhage. We have tingling sensations, numbness, and partial paralysis, with a sensation as though the arm and hand are asleep. The cyst wall in the case reported was not dissected out, because I did not believe it was necessary, and I have seen a similar course pursued in Horsley's clinic in London several times. They do not dissect out the cyst wall but make a communication between it and the subdural space. In this case the cyst was lying close to the hand and arm centers, and to have dissected it out might have injured those centers and caused paralysis of the arm and leg; consequently I simply established a communication between the cyst and subdural space to see if that would not effect a cure. I did not feel safe in dissecting the cyst; I thought it better to have the patient well without the cyst sac than to have the cyst sac under the microscope and the patient paralyzed.

*Regular Meeting, held Dec. 2, 1908.*

A regular meeting was held Dec. 2, 1908, with the president, Dr. Alfred C. Cotton, in the chair. Dr. Guy L. Hunner, of Baltimore, Md., read a paper, by invitation, entitled "Forcible Dilatation of the Kidney Pelvis as a Means of Diag-

nosis," which was discussed by Gustav Kolischer, Daniel N. Eisendrath, J. Clarence Webster, Emil Ries, and in closing by the essayist. Dr. Carl Beck followed with a paper entitled "Colitis Hemorrhagica Gravis,"\* which was illustrated by stereopticon slides. This paper was discussed by James B. Herriek, Fenton B. Turk, Carl Kessler, and in closing by Dr. Beck. On motion of A. Belcham Keyes a rising vote of thanks was extended to Dr. Hunner for his interesting and instructive paper.

#### DISCUSSION ON THE PAPER OF DR. HUNNER.

Dr. Gustav Kolischer:—The differential diagnosis in kidney troubles is still in its early stages of development, consequently any contribution which will add to our knowledge of the subject will be heartily welcomed, and especially when it comes from somebody with as rich material as the essayist has presented to-night. Of course, I can not cover all the points the author of the paper has made, but I would like to pick out those which I think should be discussed.

As to the technical side of this subject, the first question that arises is, How is it possible to distend the pelvis of the kidney? We know that in a great many cases, after the introduction of the ureteral catheter high up in the kidney, a large part of the urine produced in the kidney will run alongside the outside circumference of the catheter into the bladder. If we inject fluid into the pelvis of the kidney, under pressure this fluid will run back alongside of the ureter. This can be proven if we use colored fluid for the purpose of injection, and if we leave the cystoscope in place while the injection is made. That such a distention of the pelvis of the kidney can be brought about, I have only to say that it has been demonstrated by experiments that the pelvis of the kidney, under certain conditions, can be distended by injecting fluid. For instance, certain operators have injected collargol solution into the pelvis of the kidney, after which an x-ray picture has been taken, showing the enlarged or distended kidney pelvis. The explanation is this: Dilation of the pelvis of the kidney is due to a chronic stagnation, either to an obstruction of the ureter or to some folding that acts like a valve near the ureteral orifice. In these cases we are able to distend the kidney by the injection of fluid, because the same obstruction that caused the stagnation will prevent a reflux of the injected fluid. (Here Dr. Kolischer illustrated this point by blackboard diagrams.) Continuing, he said: I doubt very much whether it is possible to dilate the pelvis of the kidney by injections—at least the normal pelvis of the kidney, and I think all experiments that have been made show that we simply distend an already dilated pelvis of the kidney.

As to the diagnostic value of distention of the pelvis of the kidney and of ureteral catheterization in general, it is very often desirable to be in a position to make such a differential diagnosis. For instance, pyelitis in the pregnant woman not infrequently occurs, and in most of these cases the pyelitis occurs in the right kidney. Occasionally, if the ureter is inflamed on that side and the mucosa swollen near the pelvic bone, such a renal attack may be mistaken for one of appendicitis. Now, gynecologists and surgeons coincide with the view that the existence of appendicitis during pregnancy is a strict indication for early operation, and if we are in a position to make such a differential diagnosis, by ureteral catheterization, it would be a great thing; but unfortunately we can not exclude appendicitis always by diagnosing kidney trouble. Pain or colic in the pelvis of the kidney can almost universally be produced by injections, or by producing stagnation in another way, if we use the occlusive ureteral catheter, that is, one whose eye is covered by condom rubber. If the catheter is introduced into the ureter and inflated with air, then the rubber will form a balloon and block the whole ureter. If you do this for a little while the patient will complain of pain in the kidney on account of the stagnation. At the same time I would mention that the occlusive catheter does away with the objection to the modern cystoscope for catheterizing the ureters. If we introduce such a catheter

1. For text of paper see page 151.

and dilate this balloon we can use this catheter for cleaning out the ureter, we can dilate the ureter below the site of the stone, *ad libitum*, because the rubber will not come off, we can distend it as far as necessary, while the wax attachment can not be changed in size after it has once been inserted into the ureter. In fact, all that I think we can gain by ureteral catheterization and by the injection of fluid for the forcible distention of the renal pelvis is this: the urine that is drawn from the catheter will show whether or not there is the formation of pus with or without microbes in the pelvis of the kidney. By injecting fluid into the pelvis of the kidney we can determine whether there is a movable stone in it or not. But distention of the pelvis of the kidney alone is not a criterion of hydronephrosis and intermittent hydronephrosis due to dislocation of the kidney, nor of hydronephrosis due to a kink in the ureter, nor of hydronephrosis due to compression by a tumor or a pregnant uterus. All of those conditions may coexist with appendicitis or with a tumor, etc. The pain that is felt by a patient by distending a dilated pelvis of the kidney or by causing stagnation is not characteristic for kidney trouble.

So far as the diagnosis of strictures of the ureter is concerned, the method mentioned is of doubtful value. For instance, we find the ureter catheter in its passage is caught in one place to-day or the next day, or may be within half an hour afterwards it may be caught at some other point in the ureter. I would not diagnose stricture of the ureter if I did not have a chance to pass an olive-tip bougie into the kidney pelvis and in withdrawing it determine the point of constriction. Distending the pelvis of the kidney with fluid and washing it out may lead to error in one therapeutic fact. We know that even the introduction of the ureteral catheter through any obstruction, as, for instance, intermittent hydronephrosis, or in a case of pyelitis of pregnancy, leads to a subsidence of the symptoms and to a clearing up of the urine, which shows that we did not have to do with a microbial infection, otherwise it could not have been cured. We know of cases where the kidney was movable, and after injection the pronounced attacks of colic were typical, yet the disease from which the patient suffered was located in some other organ.

While we are greatly indebted to Dr. Hunner for reporting these cases to-night, yet the field has not been cleared up, and it will take more work and more painstaking observations before we can arrive at any definite conclusions.

Dr. Daniel N. Eisendrath:—This method which Dr. Hunner has given us to-night, and which has received its full development so far in this country in the Johns Hopkins Hospital, is one still in its infancy, and those of us who wish to discuss this subject must do so more from a theoretic standpoint than from the standpoint of experience. From the observations made by Dr. Hunner and from the cases which he has quoted, a field has been opened up which promises to aid abdominal diagnosis, especially in cases of intermittent hydronephrosis and also cases of kinking of the ureter (which give rise to Dittel's crises), without intermittent hydronephrosis. In these cases, if we are able, by passing the ureteral catheter and distending the pelvis, to imitate as closely as possible the pain which this method causes it will certainly be of the greatest aid in diagnosis. These are the cases which come to us frequently with only a history of having had attacks of renal colic, and when on the right side they are the cases which it is almost impossible, without either an exploratory laparotomy or some aid of this kind, to differentiate from appendicitis, especially that variety of appendicitis in which the appendix lies across the ureter, so that swelling of the appendix will give rise to pain which is referred to the ureter and simulates ureteral colic.

In regard to the question of palpation of such a renal pelvis, we are dependent altogether upon the excellent observations of Dr. Hunner. If the renal pelvis can be palpated and we can differentiate tumors of the gall-bladder in that way from tumors of the kidney, we certainly ought to welcome this method as of the greatest aid to us in diagnosis.

There is one feature of dilatation of the pelvis of the kidney which I had hoped to hear about, and that is his experience in the therapeutic field. We have

a great many cases not only of pyelitis of pregnancy but pyelitis in man and non-pregnant women, and I would like to know what the results have been in these cases from irrigating the pelvis with antiseptic solutions, in the hope of curing such a pyelitis. If we can achieve anything in some of those cases it will offer us considerable in our therapeutic measures.

Dr. J. Clarence Webster:—It is eleven years since I adopted the air distention method for examining the urinary tract in the female, and I have followed the Johns Hopkins work with very great interest. I do not think anybody who has ever taken up the air distention method in the female will use the old water distention method.

I have been much interested in following the method of diagnosis that has been referred to to-night, as well as in using the wax-tip catheter in the diagnosis of stone in the kidney, and while I have found both satisfactory I must state that they have their limitations. The wax-tip catheter may miss a stone that is in the pelvis of the kidney without any doubt, and I feel that injecting the kidney pelvis through the ureteral catheter we are apt to be misled. I think the point mentioned by Dr. Kolischer is very important. It is easy to produce an attack of pain in the pelvis of the kidney where there is no dilatation whatever. I do not agree with Dr. Kolischer that there is great difficulty in dilating the kidney pelvis with fluid, especially if the patient be in the extreme elevated lithotomy position, which I always adopt. This is much better than the genu-pectoral position in use at the Johns Hopkins. The pain produced in dilating the pelvis may be misleading, for it may cause even the patient to state in some cases that it is similar to the suffering of which she complains, when the real disease may be in the gall-bladder or elsewhere, and we should be very guarded in estimating and in making a diagnosis from the passage of ureteral catheters. However, we must confess that the work is very important, and that we owe to Johns Hopkins a very important means of diagnosis which has helped many of us and has prevented us from making as many of the mistakes made by our teachers. We know perfectly well that gynecologists of the old narrow type, who knew very little about the pelvis, made many mistakes in diagnosis, and referred many conditions to the pelvic organs, which had nothing whatever to do with them, overlooking many conditions in the upper abdomen which we are able to recognize to-day.

I am very much obliged to Dr. Hunner for his admirable paper.

Dr. Emil Ries:—While Dr. Hunner was presenting his paper I thought of all the advantages which might be derived from this method. I have tried it myself, because I have such great difficulty in finding out why some operators have so many floating kidneys to operate on and I have so few. I see many, many movable kidneys, dozens of them, and I do not believe I have operated on more than one dozen in my entire professional life. It seems to me, if this method will aid us in determining which floating kidneys cause trouble and which floating kidneys do not, then it would be a very useful method. A man of the great experience of Israel (Berlin) has come to the conclusion that a floating kidney, unless it produces definite symptoms and certain secondary pathologic conditions, does not require surgical attention, and he has reached that conclusion after having passed through the experience of having patients who were operated on for floating kidney recover from their symptoms, though imperfect local results were obtained. On the other hand, he has had the experience of having patients upon whom operation for floating kidney was perfectly successful, in so far as the kidney was in normal position and in whom the symptoms were not improved at all.

Patients come to us for operation because they are told they have a floating kidney, and they want to know whether they should be operated on or not. I had one such patient where I was sure she was a neurasthenic; but the neurasthenic may have hydronephrosis at the same time or a carcinoma, and a neurasthenic who has a hydronephrosis or a cancer is just as much entitled to a cure of those conditions as any other patient. But does the kidney make the trouble? My experience is too limited from the cases I have observed and examined by this method to be sure that it helps us in the differentiation. Some of the cases I



have examined in this way have been treated, not all by surgical means, but most of them by dietetic means, and without having anything done to their kidneys have improved; but then we know that dietetic means of themselves are good treatment for floating kidney, for the reason that a patient may gain twenty or thirty pounds in weight, and even though her kidney is still movable, it is less so. I think we will have to examine more cases than Dr. Hunner has told us about before we can arrive at certain definite conclusions in that respect. The work is interesting, and to arrive at a decision as to the necessity of operating on these neurasthenic cases is not easy, and therefore every means of diagnosis should be welcomed.

Dr. Hunner (closing the discussion):—I wish to thank the gentlemen for their kind interest and for the part they have taken in the discussion. I tried to emphasize the point that this is not one of the non-failing methods. There are very few perfect methods in medicine. This method has to be used with judgment, and we should compare our results with the use of this method with those from the use of other methods, and strike as good a mean as we can.

Regarding Dr. Kolisher's remarks about leakage beside the catheter, I do not know how large a catheter he uses. I take it Dr. Kolischer does his work with water distension, and with a Nitze type of instrument, and I believe he is not able to use by this method as large a catheter as we use, one which varies from two millimeters to two and a half. We generally use the larger sizes where we make an injection, and we practically always use colored solution. After catheterizing the kidney the patient is changed from the knee-chest position, either to the side or back, before the injection is made, and there is a glass catheter with rubber tubing leading from the bladder, so that we would know if there was any leakage, and it is the rarest thing that we get leakage. That would not affect the results as to the size of the pelvis of the kidney at all, even if we did get leakage. I cited some cases in which we threw more fluid into the kidney than we withdrew. We simply measured, when getting the size of the kidney, the amount of fluid that runs out of the catheter. When the patient has discomfort we disconnect the apparatus at the end of the catheter, and simply measure what comes back through the catheter. I might say, that in the case of the largest kidney of which you saw an illustration, we went so far as to take sufficient time to make drawings while the patient was in different positions. We clamped the rubber tubing on the end of the catheter through which the injection had been made, left the catheter in for some time, and made drawings in the standing and dorsal positions, and there was no leakage.

I am glad Dr. Kolischer mentioned the use of this helpful method in cases of pyelitis in pregnant women, and I am glad he warned us that even if we do catheterize and find the woman has pus and blood in the kidney, evidences of pyelitis, we may have to operate for a possible appendicitis. I have had that experience myself. We have found this method particularly valuable in such cases, but it is well to know that it may be misleading if depended upon to the exclusion of other evidence.

Dr. Eisendrath asked about the therapeutics of the measure. We find it more helpful in cases of pyelitis in the early months of pregnancy than in any other one class of cases. Catheterization and washing out the pelvis of the kidney with weak solution of nitrate of silver clears up the cases very quickly. We know, however, that most of these cases clear up if we put them to bed and flood them with water. It is only in those which do not react quickly that we resort to the catheter method.

As to the question of not being able to locate a stricture in the ureter, I must differ with Dr. Kolischer. I admit we do occasionally get kinks resisting the passage of the catheter, but if one repeatedly catheterizes the ureter, and always at a certain point gets resistance to the catheter, it is good evidence that there is obstruction. It may not be a stricture or a stone, but it is usually one or the other. I have met such obstruction, apparently due to a kink from inflammation secondary to appendicitis. Again, concerning therapeutics, we find the irrigation

method helpful where the patient has but one kidney, and that the seat of pyelitis or pyelonephrosis. At times such a patient will get along better if the pelvis is treated by washing.

I am glad that Dr. Webster has found air distention so valuable, as there is no question but that we can do more through an ordinary, simple tubular speculum, even though it involves learning how to use a headlight. If we have daylight or even candle-light and are not dependent on electricity, we get all sorts of advantages in examinations and local treatments of the bladder—advantages in passing wax-tipped bougies for purposes of dilatation, and it is more universally applicable for women than the other methods.

Dr. Ries' point of not seeing as many floating kidneys as other men do that need operation is very well taken. I am not one of the enthusiasts about fixing every kidney that is movable. I tried to make it clear that while thirty-two patients out of ninety-two had fixations, these ninety-two were selected cases and did not by any means represent all the floating kidneys I have seen. Many of these fixations were done in association with other operations, and would not have been done at all if the other operations were not necessary. I consider the kidney operation attended with very little risk, and if the other operation is not too severe, where there is definite movable kidney with symptoms I think fixation is the thing. I am a firm believer in the use of the binder or corset first. Many of our patients come from out of the city or state, and the use of the binder or corset can not be closely supervised, and often such patients become operative when similar patients who live in the city and can be watched do not require operation. The fact that so many cases do well with the use of the corset and binder makes one feel that there are many cases of movable kidney in which the symptoms are due to general visceroptosis, and the abdominal binder or corset helps the general condition. When a floating kidney patient has a good result after a kidney fixation done in association with some other operation, or a good result following the use of an abdominal binder or special corset, we can not be too dogmatic in our conclusions concerning the rôle of the kidney in the patient's former ill-health.

#### DISCUSSION ON THE PAPER OF DR. CARL BECK.

Dr. James B. Herrick:—We are greatly indebted to Dr. Beck for bringing before us the history and specimens of this interesting condition. I am sorry Dr. Beck did not read to you the complete histories of his cases. He kindly let me read his paper before the meeting, and I was greatly impressed with the difficulty we should have in recognizing this condition, or in differentiating it from so-called amebic dysentery. We have no clean-cut type of clinical symptoms that will enable us to recognize amebic dysentery. There are cases in which the onset is very abrupt, the course rapid, the pain severe, the tenesmus, blood, mucus and stools all marked; and the patient often succumbs after a few weeks, with or without accompanying abscess of the liver. There is another group of cases in which, with a rather abrupt onset, the course is more subacute or chronic. In these cases tenesmus, blood and mucus, fever, and emaciation are all present. The patients often pass into a condition in which there is chronic diarrhea; they become anemic, fearfully emaciated, marantic, and the arthritides described by Dr. Beck may be present. The patients may succumb or may improve. Relapses are common.

There is a third group of cases in which the onset is distinctly insidious. The patient can not tell when the trouble began. All symptoms are mild, though the chronic diarrhea is exhausting. Periods of improvement and remission are common; some patients undoubtedly recover spontaneously.

We must remember, too, that while a tropical disease, cases of amebic dysentery are seen here in Chicago, some of them having apparently developed here. Another fact is worth calling to mind, that amebic dysentery may be unattended by the ordinary painful defecation, or tenesmus. The ulcers in some of these cases are not located in the rectum, but higher up in the bowel. I mention these facts to show that there is no typical clinical history of amebic dysentery by

which the disease can be recognized, and one can not, from the clinical symptoms alone, make a positive diagnosis of amebic dysentery or exclude it; therefore, the differential diagnosis of dysentery of the type described by Dr. Beck and amebic dysentery is difficult. One must rely on the examination of the stools for amebæ. The detection of the amebæ is often easy. On the contrary, we may examine the stools repeatedly for amebæ, with negative results. To be of value the examination of the stools must be made with the utmost care. The stool must be fresh and kept warm; and only the moving ameba is to be regarded as the positive evidence of the amebic nature of the colitis, and great importance should attach to the finding of accompanying blood and pus. A few amebæ in the stool do not of themselves necessarily indicate that they are producing pathologic effects. But the difficulties are great. I have at the present time a case of amebic dysentery in the Presbyterian Hospital. The first day the house physician examined the stools with the utmost care and was unable to find amebæ; but the next day, obtaining a stool under apparently the same conditions, he had no difficulty in finding them in abundance. In fact, one field had 14 amebæ in it. A few months ago, in the County Hospital, when a change of service occurred, I asked the house physician what he thought was the matter with a certain patient, and he told me it was a case of chronic diarrhea, where amebic dysentery had been suspected. The stools had been repeatedly examined and amebæ had not been found. The new junior house physician then examined the stools and at the first examination found many amebæ. This goes to show that a negative examination does not by any means exclude amebic dysentery, and that often it is only by repeated examinations of the stools or perhaps of a little mucus obtained by means of a rectal tube that we can find the amebæ.

I was struck, too, with the similarity, to a certain extent, between the pathologic condition, as described by Dr. Beck, and that described by those who have seen many cases of amebic dysentery, with pathologic specimens. The description, for instance, given by Strong, who has had an unusual opportunity of seeing cases in the Philippines, corresponds in many respects to the description given by Dr. Beck. There is the same great thickening of the colon; polypoid-like excrescences are to be seen on the mucous surfaces of the intestines; edema is marked. The specimen, however, which Dr. Beck exhibits does not, I must admit, resemble the amebic dysentery that I have seen.

Dr. Beck mentioned Nehrkorn, who cited thirty-four operated cases collected from the literature, four from Czerny's clinic. Not a few of these cases were definite cases of amebic dysentery, which were so considered by the authors and by Nehrkorn.

We should thank Dr. Beck for bringing to us this contribution because we do not know as yet much about ulcerative and non-ulcerative colitis. There may be some organism—perhaps some animal organism—other than the ameba that is producing this condition in the bowels. We know we may have tuberculous colitis, uremic ulcers, follicular ulcers as well as the amebic ulcer; there is also the bacillary dysentery; but how many more varieties there are we do not know.

As regards operation, if the cases resist the ordinary treatment of rest, diet, and local treatment of the bowel—and I think treatment by quinin is by all odds the best—the surgeon is justified in making an artificial anus which throws out of function the inflamed portion of the bowel, but which does permit of irrigation. I think, however, Dr. Beck will agree with me that we can not be too sanguine as to the results of such treatment. I have seen but few such cases. One of the most striking, and one that proves the truth of my statement, was that of a man who had been treated in Baltimore, Philadelphia and New York for many months by dieting, by irrigation of the bowel; and finally a surgeon in the latter city made an opening into the bowel (cecum), irrigated the bowel, and kept up this treatment for nine months. Finally he allowed the opening to close or it was closed by a surgical operation, as no good had resulted from that plan of treatment. This man was almost a living skeleton; he had had his ups and

downs, and yet his stools were constantly loaded with amebæ. While operation is justifiable and is followed in some cases by good results, one can not promise patients too much from operative measures in this type of cases.

Dr. Fenton B. Turck:—I wish to report briefly an interesting case, similar to those that have been presented here to-night. The case was seen at the Post-graduate Hospital and was suffering from hemorrhagic colitis. We made repeated bacteriologic examinations of the stool and no characteristic flora were found; neither were any protozoa present. Various forms of treatment were tried but without result and an operation was therefore decided upon. A right-sided colostomy was performed. This was followed by gangrene shortly after, and in a few days the patient died. We made macro- and microscopical examination of the bowel and found the entire ascending and transverse colon involved with a similar pathologic condition as Dr. Beck has shown here to-night.

In contrast with the etiology of this form of hemorrhagic colitis, it would seem that amebic colitis is of a somewhat different nature. The recent work of Walker (*Journal of Medical Research*, February, 1908) throws some doubt on the theory that amebæ have a direct causal relation to these forms of colitis. It has been intimated that the ameba carries the colon bacilli into the tissues and even into the general circulation. I have attempted some experiments showing that the colon excretes toxins. It is characteristic for the colon to excrete toxic substances, and if you inject certain substances into the blood they can often be recovered from the colon. The interesting work of Flexner, who injected the toxins of dysentery into the blood, shows that colitis can be promptly produced. Macallum has shown that certain substances, such as strontium, when injected into the blood, are not excreted by the kidney, but by the colon. These facts would indicate that toxins are constantly excreted by the colon and they may produce various atrophic changes there.

This particular kind of infection does not appear to be such as we see in ordinary colitis; it is not the type in which we have, first, invasion of the mucous membrane; second, of the muscular coat. But it is more a general autolysis accompanied by an infiltration of round cells through the entire wall, quite different from the subacute or acute form of tropical dysentery. During the last year we have carried on some experiments in a case of infection of this kind, with hemorrhages, from China. We found that the infection was not due to the ordinary colon bacilli, nor to pus germs, but to an anaerobe, which has many of the cultural characteristics of the gas bacillus of Welch. By conducting a series of experiments in feeding animals we were able to find, at death, hemorrhages from the transverse colon down to the sigmoid flexure. In other experiments we made injections into the blood and produced similar hemorrhages.

I have recently seen two other cases of hemorrhage from the intestine, in which tropical dysentery could be excluded. The process is a slow, chronic one and has a very different appearance from the ordinary tropical dysentery. In these two cases the entire sigmoid flexure and transverse colon were involved. It is certainly true, as Dr. Beck has pointed out, that these cases are rare. We do not see many of them, but when we do find this form of hemorrhage, I believe the removal of the colon to be the only method that promises relief.

*Regular Meeting, held Dec. 9, 1908.*

A regular meeting was held Dec. 9, 1908, with the president, Alfred C. Cotton, in the chair. Edward H. Ochsner read a paper entitled "The Effect of Vaccine Therapy on Joint Tuberculosis,"\* which was discussed by John Ridlon, Edwin W. Ryerson, William J. Butler, J. F. Hultgen, a member, and in closing by the essayist. Milton R. Barker followed with a paper on "The Motility of the Stomach as a Valuable Factor in the Diagnosis of Gall-stone Disease,"\* which was discussed by Fenton B. Turck, A. J. Ochsner, and in closing by the author of the paper. Adjourned.

\* For text of papers see pages 137 and 142.



## DISCUSSION ON THE PAPER OF DR. OCHSNER.

Dr. John Ridlon:—There are two main points in Dr. Ochsner's paper, and these should be considered separately. First, the question of vaccine therapy and its effects on tuberculous joints. Second, the question of immobilization of tuberculous joints.

Two years ago to-morrow (10th of December) we began vaccine therapy work by Wright's method at the Home for the Destitute and Crippled Children. We finished the work last May. We shall not try it any more. It is not worth while. We treated fifteen cases, and tried to find out all we could in an unprejudiced way from the treatment of them. I examined all the cases personally, and made a prognosis in each case which was recorded as to how the case, in my opinion, would go on under the ordinary routine treatment without vaccine therapy; then I did not examine any of them again for six months. Then without consulting the records made in the beginning, I examined them again, and reported my opinion as to their condition at that time, so that the two records could be compared without prejudice. In the first place, we wanted to find out if by vaccine therapy we could diagnosticate tuberculous joint disease by the opsonic index, and we found we could not. We found that joint disease apparently due to inherited syphilis gave a typical opsonic index of tuberculosis. We believe that an opsonic index of tuberculosis does not necessarily indicate tuberculous joint disease, for it is present in so-called syphilitic joint disease. Furthermore, we have had one case under careful observation, a girl, who had been under my care for four years, with typical tuberculous hip joint disease, who had one active abscess, another abscess nearly healed, and still another that had been healed for some time. She had had three abscesses in the course of four years. She was found to have an opsonic index for tuberculosis persistently and constantly above the normal. There were others of a similar nature, so that it was obvious that tuberculous joint disease does not give a typical tuberculous opsonic index if the patient is in good general physical condition. If the patient is in poor physical condition, the index will be below normal.

We tried to determine whether the vaccine would in any way influence the healing of tuberculous sinuses. It did not influence them, in my opinion, one particle. They did not get well quicker or a bit slower. We tried to determine whether vaccine therapy would influence the healing of already developed, unopened tuberculous abscesses—abscesses that could be made out by palpation, which we expected might heal without opening, or disappear. Instead, they went on more rapidly, filled up, and opened spontaneously. Again, patients who presented no evidence of the development of tuberculous abscesses, and who I did not think would develop such abscesses, did develop them. I am quite convinced that the vaccination of these children with tuberculous vaccine by Wright's method not only hastens the symptoms, but causes the development of these tuberculous abscesses which would not occur otherwise.

As to the increase in the general health of the children, I will say that of the first ten children all of them but one increased in weight from two to eight pounds in the first six months. How much these children would have increased in weight without the vaccine therapy we do not know. The assistant, who had charge of the work, and who was requested to make control weights of other children, did not do so, and we do not know. We do know, however, that all but one increased in weight from two to eight pounds. One did not increase in weight. There were two children who I believed would die within three or six months under the ordinary treatment. These two were included in the first ten. One of them died.

Vaccine therapy necessarily entails a lot of expense and a lot of work. True, it is interesting work, but there is nothing in it for the practitioner.

As to the immobilization of joints and what Dr. Ochsner said about getting better and quicker functional results with the vaccine therapy than without it; it is not so. I am sure it is not so. I am sure it does not make the slightest difference. The question of immobilization is so important that orthopedic sur-

geons for thirty years have all believed and taught that it was the one thing to do, and the only thing to do if we desired to effect a cure in every case we had. All the cases must be immobilized, and when immobilized they would generally do well. With immobilization for two years they often got well with a normal range of motion. Without immobilization they would go on for four or five years and then recover with stiff joints. The general surgeon does not see as many of these cases of tuberculous joint disease as orthopedic men, and we view these cases from a broader standpoint. The orthopedic surgeons of to-day, who are thinking, observing, and unprejudiced men, men who are not riding a hobby on their own braces, or their particular fad in treatment, have learned that all tuberculous joint disease needs to be immobilized for a time; sometimes it is long, sometimes it is short, and sometimes it is longer, and sometimes it is shorter, and that there is no rule that either I or anybody else can lay down by which we can be guided in all cases as to the length of time a joint should be immobilized. We must learn to judge of it by experience; and in the light of experience one will guess right sometimes, and guess wrong at other times. But there comes a time when we no longer need to immobilize a joint; a time when it is better to release it, and by allowing motion within the limits set by the involuntary muscular spasm are doing that joint good; are hastening the cure, though diminishing the range of motion, when compared with the results of long continued immobilization.

As to the protection of these joints from weight-bearing, when the joints of the lower extremity are involved, for a time almost all these joints need to be protected from weight-bearing. Some of them do not, but most of them do. There comes a time when they need no longer be protected from weight-bearing; and when that time arrives, whether it be a week, several months, or five years, the patient will progress more rapidly toward recovery if allowed to walk upon his limb. There are some diseased joints that need to be protected from involuntary muscular spasm by traction for a time; sometimes it is a long and sometimes a short time; then they no longer need traction, and recover more rapidly without it. Then there are a few cases in which traction increases the pain, and is a positive harm.

Dr. Edwin W. Ryerson:—Dr. Ochsner is very optimistic. He showed his optimism last July, when he published a paper in the *Illinois Medical Journal*, which ended something like this: "If the surgeon treats these tuberculous joints by proper immobilization in plaster casts and by properly conducted vaccine treatment under the control of the opsonic index, there are few things more satisfactory to treat and that will give better results than joint tuberculosis." When I read those hopeful words a wave of joy swept over me, and I said to myself, at last we have discovered a way to treat these tuberculous joints. But since then I have read a good many papers about tuberculin vaccine under the control of the opsonic index which were not favorable. The treatment was carried out in some of the Eastern clinics, and the results were not very successful. I think we all must admit that vaccine therapy is the therapy of the future; it is coming, but it is not perfect yet. We have got to discover a vaccine therapy that is universally applicable. In our large hospitals we can not have all our patients under the control of the opsonic index all the time. I usually have from 30 to 40 patients with tuberculous joints in the County Hospital on my service all the time. There are two internes whose time is divided up between my service and another surgical service. How can these men determine daily the opsonic indices of all these patients. It can not be expected of them. The systematic taking of opsonic indices of patients in a large institution like that is out of the question. It can not be done. The gentlemen who are working with the opsonic index and with vaccine therapy must determine, from a large series of observations, the minimum interval after which it will be safe to repeat the dose of tuberculin. This may not be quite as ideal as the present method, but will help somewhat, at least. Now, Dr. Ochsner, in the paper I have referred to and also in this paper, reports one or more cases of secondarily infected joints

which gave as good results by the use of tuberculin vaccines as the ones which were not secondarily infected. This is where I disagree with him. Secondarily infected tuberculous joints are dangerous, not on account of the tubercle bacilli which they contain, but on account of the secondary pus-germs. Here is a solemn warning to the man who treats these tuberculous joints: Leave them alone! Do not open them. Do not get any secondary germs in them. If they are opened and drained they will infallibly get secondary infection in a short time. Where is your tuberculin therapy then? You are now trying to combat infection by the staphylococcus, the streptococcus, or the bacillus pyocyaneus; your tuberculin will not raise the opsonic index for these germs, but only for tubercle bacilli. To cure these secondary infections we should have to use vaccines prepared from all the other germs present. That has been the experience of men who have done this kind of work, although Dr. Ochsner apparently uses only tuberculin. The immobilization therapy is well established for tuberculous joints, as forcibly pointed out by Dr. Ridlon this evening. I have seen many tuberculous joints, treated properly by immobilization, recover perfectly, though in a somewhat longer time than that mentioned in Dr. Ochsner's cases. They did as well by immobilization alone. In my opinion, no tuberculous joint gets well in a year, and I understand these experiments have been going on for only a year. I do not believe tuberculous joints get well as soon as that.

Dr. Ochsner:—I said two years.

Dr. Ryerson:—Some of them get well in two years, but not many of them. The watchword in the treatment of tuberculous joints must be to keep them immobilized as long as necessary, and keep them from becoming secondarily infected. I do not wish to be understood as condemning vaccine therapy in the treatment of secondarily infected joints; but I do not think tuberculin alone will cure them. We must get at the other germs. In this connection Beck's paste is a very useful thing. We must look to the future for a method of vaccine therapy which has not yet been elaborated, for the use of those of us who see such a large number of these tuberculous joints that it is impossible to take and keep track of their opsonic indices.

Dr. William J. Butler:—With reference to vaccine therapy, I had the opportunity recently of listening to Dr. Taylor, of Baltimore, who reported having treated 34 tuberculous joints with tuberculin, and he gave a most favorable report of the results obtained by him, similar to what Dr. Ochsner has given us this evening.

There are some points I wish to speak of in connection with this subject, and one of them is the use of skin vaccination in deciding whether a joint is tuberculous or not. I believe that it is absolutely worthless. We seem to forget that any patient who has had a healed tuberculosis at some time or other may give a reaction to tuberculin vaccination; it does not make any difference how long that may have been, the patient may give a reaction just the same. If the subcutaneous vaccination is sufficiently large to produce a local effect, we may be able to decide from this diagnostic recourse whether a joint lesion is tuberculous or not; but a skin vaccination per se is worthless in deciding whether a given local lesion in a joint or elsewhere is tuberculous or not beyond the period of infancy. It may only be used as a definite diagnostic procedure in early infancy.

As to the opsonic index, it likewise has its limitations in deciding whether a joint lesion or any other local lesion is tuberculous or not. Unless undulations in the immunity wave are occurring as the result of autoinoculations, there is only one way in which the opsonic index may be resorted to so as to decide whether a joint lesion is tuberculous or not, and that is to resort to local means of producing autoinoculation by inducing hyperemia in the tissue around the joint. Under these circumstances the opsonic index may suggest that the local lesion is tuberculous; but a single opsonic index of a patient with a joint lesion may be of no value; in fact, several opsonic indices without this precaution may have no value. It is true, not all joint lesions that are congested by local means will give a typical and classical opsonic variation.

In the treatment of tuberculous lesions, immunizing the organism by vaccination will not affect locally the part in every instance, unless some means is used to determine the blood to the part. Of course, that may seem theoretical to some of you, but Bier's treatment is the best evidence that it is not theoretical, because we know that Bier's treatment does help joint lesions, in all probability the direct result of autoinoculation and in determining blood to the part.

Dr. J. F. Hultgen:—I was very glad to hear what Dr. Ochsner had to say with reference to vaccine therapy in the treatment of tuberculous joints, and I fully agree with Dr. Ryerson that we must look to the future for a reliable method of vaccine-treatment in these cases. Of course, we are wrestling with it to-day as best we can. The treatment of tuberculosis by means of vaccines has not been very satisfactory. It seems to me, as Wright has pointed out, the opsonic index measures only one of four or five different factors in the defensive organization of the system. There is the bactericidal, bacteriolytic action, and the process of agglutination, and yet we use only one method in determining whether there is tuberculosis or not. Wright has not demonstrated that the leucocytes do not take part. He has demonstrated that these opsonic substances are in the serum, and no more. I think all attempts at treatment by vaccination will result more or less in failure, because it is too cumbersome a method and because the sources of error are too manifold. When a patient is recovering from any infectious disease the condition of the blood is an important factor. We have a total count of seven thousand or six thousand, with mononucleosis and eosinophilia. That is a desirable state of the blood, otherwise patients would not recover.

The technic of determining the number and proportion of leucocytes together with the opsonic index is the ideal method, and if we only look for the opsonic index alone, we do not do justice to ourselves or to the patient. I find tuberculosis is the same in any part of the body, whether it involves the lungs, bones or glands. I think we should devote more attention to the blood findings in infectious diseases. In tuberculosis we find an increase in the total number of white blood cells when there is secondary infection, but *not* when there is caseation associated with the tuberculous process. In this way one can tell by the blood findings whether tuberculous glands have undergone caseation or not.

Dr. Ochsner (closing the discussion):—I have no quarrel with my orthopedic friends on the general principles which they have stated, in fact, I have incorporated these same principles in my paper, and I have treated practically all cases of joint tuberculosis that have come to me in the last twelve years very much as thus outlined. For the past two years I have used vaccine therapy in addition.

In regard to the question of the opsonic index as a diagnostic measure I can only say that it is of distinct value, but of course not always reliable. It is, however, quite as reliable as most signs and symptoms taken individually. Dr. Ridlon says that he has used vaccine therapy in fifteen cases, has found it wanting and consequently condemns it. I have used it in about 150 cases. I have studied my cases very carefully and I feel convinced that if Dr. Ridlon would follow up his cases with the same care he would soon find that there is much in this treatment for the patient. Of course, it is to be regretted that at present the method is so complicated, but I hope that sooner or later it may be easier of application.

Dr. Ryerson says that the man who has a great many tubercular joints to treat can not keep track of every individual case, particularly in large institutions, where the internes have so many things to do. I do not believe this is a valid objection. While I probably do not have as many cases of joint tuberculosis constantly as has Dr. Ryerson, I usually have more than twenty under treatment, and we do watch the opsonic index carefully enough so as to avoid giving vaccine during a distinct negative phase and to avoid giving excessive doses. We have given several thousand injections of vaccine in the last two years, and so far as I am able to determine we have given it at the wrong time



or have given an overdose only four times. I have read every available reprint on vaccine therapy that has appeared in the last two years, and I believe I can tell when I read these reprints why certain men have had poor results. Usually it is because they either give too large doses, repeat them too frequently or give them at the wrong time, or because they depend upon vaccine therapy alone, neglecting to make use of all of the well established remedies hitherto employed. You will note that one of the first statements I made in my paper was that, in my opinion, I considered vaccine treatment a valuable adjunct. If a physician is going to depend upon vaccine treatment alone in these cases he is sure to fail in a large per cent. of them, and he ought to fail, but no more so than he would in the treatment of any affection if he depended upon one remedy alone, where many should be used.

With regard to incising a tubercular abscess in the vicinity of a joint I wish to say that I have never deliberately drained and thus secondarily infected a tubercular joint, except during my service as an interne, when I did so on several occasions under the direction of my attending man. I learned my lesson then and have never repeated the offense since. Secondary infection is the worst thing that can possibly happen to any tubercular process. Unfortunately many of these cases come to me already secondarily infected. I then immobilize them with a fenestrated plaster-of-Paris cast, put them under good hygienic conditions, inject them with Beck's bismuth paste, another valuable adjunct, and put them on vaccine treatment. I have a patient, a boy now about 9 years old, who, when he was put on this treatment about two years ago, had twenty sinuses discharging great quantities of pus, pyrexia, chills, rapid pulse, and he had that peculiar cyanosis which is usually indicative of impending dissolution. To-day the sinuses are all healed and he is a fine, healthy, rosy looking boy. I have a little girl with sacroiliac tuberculosis which became secondarily infected two years ago. She came to me about fifteen months ago, discharging large quantities of pus. I placed her on the above treatment, she has exfoliated fourteen sequestra, the discharge of pus has greatly decreased and will undoubtedly cease as soon as the last sequestrum has come out. She weighed only 35 pounds when she came to me. Now she weighs 58, plays out of doors all day and is, except for the small persisting sinus, in perfect health. I could recount many such cases, but time will not permit.

I wish to repeat that I believe that vaccine therapy, when properly applied, will minimize connective tissue formation and that it will favor a process of healing, which will often also occur without its use, but which, so far as I know, has never before been described or even thought of as a possible method of the healing of tubercular processes. I believe it is our duty to utilize this and thereby get much better functional and anatomic results in the great majority of cases suffering from joint tuberculosis.

#### DISCUSSION ON PAPER OF DR. BARKER.

Dr. Fenton B. Turck:—It is refreshing to see work that bears the stamp of originality, as in the paper we have had presented to us this evening by Dr. Barker. It is refreshing to have an investigator make original investigations in connection with his cases and present his ideas in a scientific manner for discussion. This is what Dr. Barker has done.

One interesting point brought out I wish to refer to, namely, the differential diagnosis between intrinsic and extrinsic gastric disturbance. I remember some time ago a case which was presented before this society as one of gastric neurosis and myasthenia, with identical symptoms as presented by the essayist to night. I made the statement at that time that I thought it was a gall-stone case, and I think it was afterwards found to be so. Also, two years ago I saw a patient who began to have considerable elevation of temperature at about 3 o'clock in the morning. He had chills, but a blood examination excluded malaria. Examination of the stomach showed that motility was normal, and, although the symptoms pointed to gastric trouble, I made a diagnosis of cholangitis, and at

the Postgraduate Hospital the surgeon opened the abdomen and found infection of the gall ducts. We made cultures for two months afterwards and were able to obtain colonies of colon bacilli. Finally, there was a disappearance of all infection, and the patient recovered from all symptoms.

Those points are so valuable that it is important for us in analyzing such cases to disregard symptoms in many of them. The gastric symptoms are not so important. For instance, there may be loss of appetite at one time, then increased appetite. There may be belching at one time and absence of it at another time, so that the symptomatology we formerly leaned upon is now a very poor crutch. However, the symptoms help us sometimes in investigation.

Dr. Barker made investigations and has now called our attention to the most important function of the stomach, that which concerns motility. The secretions may vary. The secretion may be hyperacid at one time, and hypoacid at another time. At one time it may have a good pepsin reaction; at another time it may have none. There may be yeast sometimes; at other times none. There may be great variations in the secretory function because this depends upon the nervous mechanism. When motility of the stomach does not depend upon nervous mechanism, then we look upon the musculature for the movements of the stomach. When it is not stimulated by any chemical substance or by the nerve supply directly or indirectly, the pyloric orifice is influenced by spasms, opening and closing through a nervous mechanism. But stimulation of the nerves of the stomach does not excite motion. I made experiments with electricity and found that I could not excite the nerves by any method. I injected bouillon and saturated solutions of peptones, and they produced no effect on the motility of the stomach. I made injections into the general circulation of animals and they did not have any effect on general motility. We carried out some experiments by injecting animals with adrenalin, strychnin, belladonna and apomorphin, and none of these drugs in any way, whether given in lethal or physiologic doses, produced any effects on the movements of the stomach. We tried to influence motility by chemical experiments, examining with the x-ray and with bismuth, but the results were negative. This is very significant, because we can see motility must be influenced outside of chemical stimulation. We undertook to influence motility of the stomach by mechanical means, and we found that stretching by mechanical means immediately excited peristalsis. With so many millimeters of air pressure, say 30 to 40, we reached the height of mechanical stimulation, the air acting upon the muscle mechanism. Resection of the pneumogastric nerve, and paralysis of the plexus of nerves in the walls of the stomach, did not interfere with the movements of the stomach, which were the same after such resection of nerves and paralysis of the nerve supply. We could only effect these movements through tension acting upon the muscle cells. This led us further to another line of experiments, and brings us to an important point which bears out the contention of the essayist, and that is, if we continue a long process of stretching—in other words, if we fatigue the muscle and allow the stomach to distend and retract again, for a long time, it will go beyond the height of stimulation, to that known as physiologic fatigue; it does not respond any more to physiologic stimulus, and if constant exercise of the muscles with air or water is kept up, there results complete fatigue, and we have an acute dilatation of the stomach. With such dilatation, if we allow the animal food afterwards, and keep the stomach full of food, we get increased chronic dilatation of the stomach, with retention showing in these dogs that there can be no retention without a physiologic pathologic basis for the lack of motility. If we feed these animals for three or four months, we would have chronic dilatation and retention. I find this also to be the case in the human. Where we found we could stretch the stomach with air and it would not respond to stimulants, owing to the fatigue of the gastric muscle, this condition alone would account for the symptoms from which the patients suffered. How shall we establish these facts and make them stand out prominently as diagnostic factors of intrinsic

gastric disturbance? I have protocols showing different forms of dilatation and retention, with the effects on animals, but as my time is limited I will not read them.

I shall now ask the operator to throw a few slides on the screen in order that you may know exactly what we mean by this so-called functional insufficiency of the musculature of the stomach.

Where we have symptoms that are due to intrinsic condition we must expect some gastric disturbance or lesion. In cases in which there is no lack of motility, but in which the motor power is normal, we must look outside of the stomach for disturbance in these cases. I am referring now particularly to the motility of the stomach, and I think if we paid less attention to the symptomatology in these cases and more to the evidences concerning motility, we should accomplish much more than we do at present.

As to the methods by which we make this determination, it is essential to differentiate between a lack of motility and normal motility, and if we find a case in which we have excluded a lack of motility, then we must look to the outside as to the cause of the disturbance. Again, if we find in a case there is persistent lack of motility, then we must differentiate between that due to this condition of the muscle wall and that due to some obstruction to the outlet, and this is determined as follows: We first determine the length of time that retention takes place; second, we test the response of the muscle to stimulation with air by stretching. If it fails to respond to such exercise, the muscle walls are involved, and it becomes a true intragastric disturbance. By distending the stomach with air and using more or less force, the air is expelled from the stomach through a tube, the degree of the expulsive force indicating the degree of power of the muscle wall. We are therefore, by direct measurement, able to determine with reasonable certainty the differentiation between lack of motor power due to muscle weakness and that due to obstruction to the outlet.

As to treatment, I simply wish to say that in these cases of disturbance from lack of motor power of the stomach our best surgeons have learned to recognize that these functional disturbances or physiological defects ought to be corrected and cured permanently by physiologic means. But if the disturbing factor is extrinsic to the stomach, as in the gall-bladder, producing these symptoms, and where there is a total or partial obstruction, as shown by Dr. Barber's cases, and also causing great retention, it should be corrected by surgical means. But the majority of cases of intragastric disturbance need not be treated surgically but should be treated along physiologic lines.

Dr. A. J. Ochsner:—This subject can be stated concisely about as follows: Patients suffering from severe digestive disturbances referred directly to the stomach who have neither a diseased stomach nor indigestion due to the neurotic conditions, are suffering in fact from gallstones. If there is pain upon deep pressure over Mayo Robson's point half way between the end of the ninth rib and the umbilicus and at Boas' point opposite the tenth intercostal space six to eight centimeters to the right of the spine we can be certain that the diagnosis is correct. To this statement we should add the fact that ulcer of the duodenum and appendicitis should be excluded.

Dr. Barker (closing the discussion):—I am grateful for the discussion which my paper has elicited. The burden of my paper is to impart to others that which has been useful to me in making a differential diagnosis in these obscure cases. When one of these cases presents itself to us, the first question for us to solve is, is this an intrinsic gastric lesion or is the lesion extrinsic to the stomach? The best way in which this problem can be solved in my judgment is to test the motility of the stomach wall. If that is found to be normal, in the great majority of cases we will find the lesion to be extrinsic to the stomach. When this is determined we have gone a long way towards making a differential diagnosis. However, there are other diagnostic problems to solve in these cases, after the above question has been settled, chief among which is to differentiate between a true pathology that may be removed surgically and a neurological or psychological condition. This may prove to be a monumental task in some cases.

## AUX PLAINES BRANCH—CHICAGO MEDICAL SOCIETY.

## REPORT OF A CASE OF POPLITEAL ANEURYSM TREATED BY "OBBLITERATIVE ENDOANEURYSMORRHAPHY" MATAS.

CHAS. E. HUMISTON, M.D. AUSTIN, ILL.

Adjunct Professor of Surgery in the University of Illinois; Attending Surgeon to Cook County, St. Anne's and Oak Park Hospitals.

The renewed interest in the Matas operation for aneurysm aroused by the presentation of the "Statistics of Endoaneurysmorrhaphy" by Dr. Matas at the 1908 meeting of the American Medical Association leads me to publish the details of this, one of the eighty-five cases reported to June 1, 1908. According to Dr. Matas, this is the only typical operation reported from Illinois.

While the history and physical findings seem fairly typical of aneurysm, the majority of those who saw the patient in the clinic at Cook County Hospital favored the diagnosis of sarcoma. The most valuable point in the diagnosis was in the placing of a constrictor about the thigh above the tumor, after digital compression of the femoral artery had failed to yield any helpful result.

A. F., aged 51, a teamster, was admitted to my service at Cook County Hospital, Jan. 13, 1908, as patient No. 365,466, with the following history: Six weeks previous to his entrance to the hospital he noticed a small swelling in the right popliteal region. It was egg-shaped and pulsated. After doing an unusual amount of walking, the tumor began increasing in size, and this growth was rapid and constant up to the date of admission. There was considerable discomfort and tenderness due to the swelling and edema, but no severe pain. The patient remembers that he was kicked upon this knee by a horse three years ago and that he was disabled for two weeks at that time.

The general examination was negative, except the right lower extremity, which showed a large ovoid tumor occupying the popliteal region, encroaching somewhat upon the calf and extending upward to above the middle of the thigh—the long vertical diameter measured nine inches, and the shorter transverse dimension was six inches. The skin over the tumor was tense, and laterally showed numerous large veins, while posteriorly it was red and inflamed. The tumor was uniformly firm and fixed and was characterized by an expansile pulsation. A bruit could be made out but was not marked. Compression of the femoral artery made no appreciable change in the size or the consistency of the tumor, but later when a constrictor was applied around the thigh close up to the body there was a very perceptible diminution in its volume. The limb below the knee was markedly swollen and edematous. The other limbs were normal.

*Operation:*—"Internal Obliterative Aneurysmorrhaphy—Matas" was done, Jan. 18, 1908. An incision eight inches long was made extending upward from the level of the knee joint and placed postero-internal to the thigh. Upon dissecting through the fascia and muscles into the sac, about eight ounces of dark fluid blood escaped, and upon opening the sac widely a large blood clot about the size and consistency of an adult brain was scooped out. The tissue and sac posteriorly were deeply discolored, and almost on the point of breaking down. After thoroughly clearing the sac of its contents, at its deepest part was seen two large openings separated by a space of two inches. The upper opening—the larger, easily admitted the forefinger its entire length, while the lower was much smaller. Between these two openings the surface was flat and continuous with the sac wall, and showed the openings of several arterial branches.

The original condition was doubtless a fusiform aneurysm of the popliteal artery which had ruptured, thus leading to the formation of a large false aneurysm whose wall was for the most part made up of connective tissue; the only true arterial coats being a comparatively small area corresponding to the original arterial dilatation, a part of which still persisted, as shown by the dilated opening above.

The inlet and the outlet of the sac, together with the openings of three or four arterial branches, were closed with No. 1 chromic catgut doubled. The sac of the original aneurysm was then infolded upon itself by a triple row of No. 1



doubled catgut sutures, the second and third rows extending upward and obliterating the lumen of the dilated portion of the artery still remaining, that is, the remainder of the original aneurysm. The constrictor was now removed and a compress of hot iodine solution applied, which easily controlled the oozing from the surrounding tissues. The condition of the posterior portion of the false sac and of the overlying structures did not warrant complete closure of the incision, and so a large iodoform gauze drain was inserted.

On the third day the drain was removed and the wound found to be in good condition. The temperature, which at the time of operation was 102, became normal on the fourth day and remained normal thereafter. The circulation below the site of operation was maintained, the foot and toes remaining warm from the first. At this time, eight months after the operation, a careful examination of the patient's limb indicates a complete cure of the aneurysm.

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#### CHRISTIAN COUNTY.

On Thursday, January 21, was held the first meeting of the Christian County Medical Society for the year 1909, and it was a most enjoyable meeting. After the regular business was disposed of Dr. J. C. Myers, of Clinton, the first on the program, was called and read a paper entitled "What a Surgeon Can Do in a Small Town." The paper was very interesting and brought out pointed discussion from several members of the society. This paper was followed by one from Dr. J. J. Connor, of Pana, whose subject was "An Inquiry Into and a Study of the Subconscious Mind." This paper was also interesting and brought forth much discussion and many commendatory remarks from the members present. The paper certainly took much reading and thought in its preparation. The last paper on the program was by Dr. Jesse P. Simpson, whose subject was "Modern Conceptions of Appendicitis—Brief Report of Cases Operated on and Exhibition of Pathological Specimens." This paper deserves much wider publication. While the discussion was limited by the lateness of the hour it was pronounced one of the best papers brought before the society for a long time.

About one-third of the entire membership of the society was present, and, while we have had larger attendance at times, it has been rare that we have had a more enjoyable meeting. Out of fifty-two physicians practicing in the county we have forty-three members, and one-third of the membership was present at this meeting.

The following are the newly elected officers: President, Dr. J. H. Dickerson (re-elected), Taylorville; vice-president, Dr. Jesse P. Simpson, Palmer; secretary-treasurer, Dr. D. D. Barr, Taylorville; delegate to state convention, Dr. J. N. Nehms, Taylorville; alternate, Dr. J. J. Connor, Pana; censors, Dr. C. A. Stokes, Edinburg; Dr. R. C. Danford, Pana; Dr. Chas. M. Seaton, Morrisonville; member legal committee, Dr. J. J. Connor, Pana; committee on program and scientific work, the president and secretary, aided by Dr. Jesse P. Simpson, Palmer; Dr. A. T. Gibson, Morrisonville; Dr. Albert Field, Stonington; Dr. C. A. Stokes, Edinburg; Dr. F. J. Eberspacher, Pana; committee on public health and legislation, Dr. J. H. Miller, Pana.

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#### DOUGLAS COUNTY.

The Douglas County Medical Society held its annual meeting in the Knights of Pythias Hall, at Tuscola, Thursday, Jan. 7, 1909, at 2 p. m. Dr. Martin, the president, called the meeting to order. Other members present: I. W. Hall, W. A. Wiseman and A. O. Carmack, all of Camargo; B. T. McClain, of Atwood; J. L. Reat, W. E. Rice, David T. Hanson and W. C. Blaine, all of Tuscola. The applications of David T. Hanson, of Tuscola, and C. P. Wilson, of Hume, being recommended by the Board of Censors, were read, and they were elected to membership. The secretary reported twenty members in good standing for the year 1908.

The question of adopting a county fee bill was discussed. A resolution was introduced that the secretary send a copy of the fee bill formulated previously before the society to each regular physician in the county, for his approval and urge him to be present at the next regular meeting to discuss the same.

The following resolution, signed by E. S. Allen, H. I. McNeil and W. A. Wiseman, was then presented by the secretary.

"We, the members of the Douglas County Medical Society, having had it brought to our attention that there are certain practicing physicians in this county who place large cards in the local papers, calling themselves specialists, when it is known to us that they are not learned in such specialties as they advertise, and further, by placing short items advertising themselves in the locals of newspapers, and by distributing advertising cards, they take an unfair advantage of local practicing physicians in their locality, who are members in good standing in this society. We believe these methods to be against the best and highest ideals of the profession. We are also convinced that these unethical practitioners receive moral support in securing, in consultation or for surgical operation, the best talent among the members of county and state societies and the American Medical Association. We believe if the members of such medical societies would not hold consultation with, or operate for, these "quacks," that they would soon quit advertising and come into the fold. Therefore be it

*Resolved*, By the Douglas County Medical Society, that we severely condemn any physician or surgeon in good standing in the County, State or American Medical Association, who consults with or operates with or for such "quacks," and be it further

*Resolved*, That any physician or surgeon who aids these "quacks" by consulting with or operating with or for them is, in our opinion, non-ethical and unfit to retain membership in any of the above societies."

The following officers were elected for the ensuing year: President, I. W. Hall, Camargo; vice-president, B. T. McClain, Atwood; secretary-treasurer, W. C. Blaine, Tuscola; board of censors, J. L. Reat and W. E. Rice, Tuscola, and W. A. Wiseman, Camargo. There being no further business, the society adjourned.

W. C. BLAINE, Secretary.

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## JEFFERSON COUNTY.

The Jefferson County Medical Society met in "special session" on the regular meeting day, at Elks' Hall, Mt. Vernon, Ill., Dec. 23, 1908, at 10:30 a. m. The meeting was called to order by the president, Dr. J. T. Whitlock. The following members were present: Drs. H. L. Gee, T. P. Ward, L. C. Morgan, H. M. Swift, J. W. Hamilton, Chas. Hall, C. J. Poole, A. T. Levick, J. T. Whitlock, Andy Hall and W. H. Gilmore, of Mt. Vernon; Dr. J. W. Wells, of Waltonville; Dr. Simmons, of Texico; Dr. S. A. Thompson, of Ina; Dr. Porker, of Rouge, and Dr. T. A. Clark, of Dix. Mr. Porker, of Rouge, and Mr. Kell, of Mt. Vernon, fourth year medical students, were guests of the society. The minutes of the November meeting were read and approved. The treasurer's report was read. Drs. Leach and Morgan reported the illness of Drs. S. M. Roberson and H. S. Plummer, and the members were invited to call.

The following papers were read: "Ptomaine Poisoning," Dr. H. M. Swift, of Mt. Vernon. Discussed by Drs. Morgan, Levick, Hamilton, Chas. Hall, Ward and Gilmore. Closed by Dr. Swift. "Abdominal Drainage," Dr. C. J. Poole, of Mt. Vernon. Discussed by Drs. Andy Hall, Hamilton and Ward. Closed by Dr. Poole. "Acute Dilation of Stomach Following Child-birth," Dr. T. P. Ward, of Mt. Vernon. Discussed by Drs. Andy Hall and Levick. Closed by Dr. Ward. The meeting was then thrown open for the general report of cases. Six cases of punctured wound of the eyeball with protrusion of iris were reported. Iridectomy was performed in four cases; iris returned to position without operation in one case, and by the use of atropin in one case. Vision almost normal in all in-

stances. Dr. Andy Hall reported a case of cataract, followed by infection from a "hen-peck," making enucleation necessary. Ulceration of cornea was fully discussed.

At 12:30 p. m. the society adjourned to Manion's restaurant, where an old-fashioned turkey dinner was served.

At 2:30 p. m. the society was called to order by the vice-president, Dr. A. T. Levick, and the program continued as follows: "Some Unpleasant Things in the Practice of Medicine," Dr. J. W. Hamilton, of Mt. Vernon. Many members expressed themselves "that Dr. Hamilton had hit the mark." "Obstetrical Accidents," Dr. Andy Hall, of Mt. Vernon. Discussed by Drs. Thompson, Levick, Poole, Hamilton, Gilmore, Simmons and Whitlock. Closed by Dr. Hall.

This meeting was the first of what the society wants to make regular quarterly affairs. The society is expecting Dr. Pettit in April and wants to show what can be done in "Egypt."

#### MADISON COUNTY.

The Madison County Medical Society met in annual session in the Commercial Building, at Alton, Dec. 4, 1908, at 2 p. m., with the president, Waldo Fisher, in the chair. Members present: Drs. Smith, Engel, Beard, Fisher, T. P. Yerkes, Foulds, Robinson, Dorr, Sims, Burroughs, Pogue, Pfeifferberger, Hastings, Ihne, Taphorn, J. H. Fiegenbaum, Johnson, Cook, J. W. Scott, Ferguson, H. R. Lemen, W. W. Everett, Haliburton and E. W. Fiegenbaum. Visitors: Drs. Parl Howe and Emma Howe. The minutes of the last meeting were read and approved. An exhaustive written report touching upon the various items of interest on the program of the last state society meeting was made by our state delegate, Dr. S. T. Robinson, which was on motion accepted with a vote of thanks. Resolution presented by Dr. A. J. Ihne, of Fosterburg:

WHEREAS, The publishing by the press of the names of physicians attending upon medical or surgical cases is contrary to the ethical spirit of the members of the society; therefore be it

*Resolved*, That the secretary request the publishers of all newspapers in Madison county to refrain from mentioning the name or names of the physician or physicians in attendance upon any sick person, so far as it is consistent and practical. Adopted by unanimous vote.

Resolution presented by Dr. W. H. C. Smith, of Godfrey.

*Resolved*, That the gateway to this county medical society being the gateway to professional standing in the country at large, that the code of ethics of the American Medical Association be strictly adhered to by this society, and its flagrant infringement be deemed sufficient cause for dropping from the roll the name of any physician so engaged, in order that our professional standing may be of the highest. By motion unanimously adopted.

Resolution submitted by Dr. E. C. Ferguson, Edwardsville. Be it

*Resolved*, By the Madison County Medical Society, that in accepting an election to the annual presidency of this society, the gentleman chosen to such leadership, assumes the duty of delivering to the members thereof at the quarterly meeting following in June, an address or lecture on medicine or surgery, notice of same to be incorporated by the secretary in the usual printed program. Adopted without a dissenting vote.

The committee on resolutions on the death of Dr. L. C. Schuessler presented a report which was adopted, and the secretary requested to send a copy to the family of the deceased.

The election of officers resulted as follows: President, S. T. Robinson, Edwardsville; vice-president, G. Taphorn, Alton; secretary, E. W. Fiegenbaum, Edwardsville; treasurer, J. H. Fiegenbaum, Alton; board of censors, W. H. C. Smith, Godfrey (to serve three years); state delegate, T. L. Foulds, Alton; alternate, J. M. Pfeifferberger, Alton.

On motion of Dr. W. H. C. Smith, duly seconded, it was ordered that the secretary be instructed to send a copy of a resolution adopted at our meeting on Sept. 6, 1907, in favor of establishing a state colony for the care and treatment of epileptics, to the governor of the state, to our representatives in the legislature and to each member of the committee on appropriations.

A letter from National Organizer Dr. J. N. McCormack, in regard to establishing a National Department of Public Health, was read and the movement was, by a vote of this society, heartily endorsed, and the secretary was instructed to write to our representatives in Congress to urge them to lend their votes and influence to create such a department.

The society then was favored by a very well written paper on "Antitoxin and Its Use," by Dr. Lay G. Burroughs, of Collinsville, which was quite an exhaustive article on the present status of this valuable agent and elicited a lively discussion participated in by a majority of members present and ably led by Dr. E. C. Ferguson, of Edwardsville.

A vote of thanks was tendered to the Alton Retail Merchants Association for the use of their room. Upon invitation by Dr. Sims it was ordered that our next meeting be held in Collinsville on the first Friday in March, 1909. On motion adjourned.

E. W. FIEGENBAUM, Secretary.

### ANTITOXIN AND ITS USE.\*

L. G. BURROUGHS, M.D., COLLINSVILLE, ILL.

In the early part of the year 1890 two Japanese by the name of Ogata and Jasuhara, who by their clinical experience upon the guinea-pig, conceived the idea of a serum which when taken from the blood of an already infected animal and injected into another, would either protect or prolong the course of the disease. This idea was later taken up by Frankle, who did not develop any satisfactory results, but opened the doorway to Behring, who in the latter part of 1890, by a series of experiments, introduced to the medical profession his new treatment for diphtheria, a serum which being antagonistic to the growth and development of the diphtheria bacillus, was called diphtheria antitoxin.

Notwithstanding the fact, however, that he had demonstrated the virtue of his discovery, it was very seldom used, and then only with fear and uncertainty until nearly 1895, at which time it had been sufficiently tested to prove its virtue, although there yet remains at the present time some physicians who are still skeptical to its true value in the human economy.

I shall not attempt in this paper to discuss the source and method of preparation of the antitoxin, for none of us are particularly concerned in this direction, sufficing to say only, that it is derived from the blood of a horse in which immunity has been established. Concerning the nature and method of action of antitoxin, little is yet known. According to one theory, its action is purely chemical, neutralizing the diphtheria toxins present in the blood, while others claim its action by increasing the resisting powers of the cells of the body to the diphtheria toxins.

In the early days of its use the antitoxin was comparatively weak, and large quantities, as much as 20 c.c., were required for a single dose, and many of the unfavorable results at first reported were doubtless due to the large amount of horse serum which was necessary to inject in order to get a sufficient dose of the antitoxin, while to-day, however, the strength of the antitoxin is very much increased so that possibly 5 or 6 c.c. are sufficient for the average dose. The first use of antitoxin was that of a curative nature, and the idea of establishing immunity or protection to the healthy individual was not considered and established until several years following its employment, and we now recognize antitoxin to have a two-fold nature; first, I might say, in the protection of the healthy, and, second, a curative purpose in the diseased condition.

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\*Read before the Madison County Medical Society at Alton, Ill., on Friday, December 4.



Concerning the real and alleged danger from antitoxin where death has followed its administration, there is not sufficient evidence that death was the result of antitoxin, for in some of these cases the autopsy has revealed a status lymphaticus where the shock of so slight a thing as a needle puncture might produce death. While heart paralysis and post palatal paralysis do occur, the life of the patient may be saved by the application of the proper remedy, for it is to be remembered that diphtheria causes death by paralysis, general toxemia or nephritis. No evidence has been adduced as to the danger or injurious effects of the antitoxin which should deter any one from its use.

It was customary in the early days of the serum treatment for the physician to make a bacteriological test of a smear from the child's throat, and if the diagnosis was one of diphtheria he would then advocate the use of the antitoxin, and in this way lose valuable time besides causing himself great anxiety and probably the loss of his patient.

To-day, however, we advocate the early use of the antitoxin, and, as for my opinion, I believe that the physician who practices the early administration of the antitoxin not only practices good medicine but practices economy, for I believe it is economy to be liberal in the use of antitoxin, as the disease is thereby shortened and the life of the patient saved. The investigation by the Chicago Health Department shows the average mortality from diphtheria where antitoxin is used: Upon the first day,  $1\frac{1}{2}$  per cent.; upon the second day, 4 per cent.; upon the third day,  $5\frac{1}{2}$  per cent.; upon the fourth day,  $7\frac{1}{4}$  per cent., and after the fourth day  $14\frac{1}{2}$  per cent. These figures prove the importance of the early use of antitoxin and a still higher per cent. of recoveries may be secured by increased doses and the early administration, for every case of even suspected diphtheria should immediately receive from three to five thousand units.

There is one condition, however, which greatly governs this early administration, for we who practice in rural districts often do not see our patients until the second or possibly the third day of the disease, for the average mother does not counsel her physician until she sees some evidence that her child is getting worse, and finally after the application of a few home remedies without any results, she now summons her physician, when possibly the disease has sufficiently claimed its victim and our case is hopeless.

How can this condition of affairs be changed? The physician must impress upon the patients the importance of early treatment and the disastrous results that may develop if allowed to run on, and I firmly believe that it behooves us, as medical men, to impress upon our people the importance of giving all these so-called sore throats in children prompt and early attention, so that we can practice preventive medicine, rather than curative medicine.

Some of you in your long years of experience have possibly seen cases which upon your first visit were inclined to believe your case to be only of a mild type (a follicular tonsillitis or a membranous condition of little importance), but 24 to 36 hours later you find your patient in the last stages of what you now believe to be diphtheria. Such cases as these occurring in children, particularly in localities where diphtheria is known to be prevalent, should receive the antitoxin early while waiting the bacteriological test, for if the antitoxin does no harm, why not advocate its employment in the child which looks suspicious, so that we can protect the child from any further possibility of danger from that disastrous malady. If you have any doubt in your mind as to whether your case requires the antitoxin I believe firmly that the child should have the advantage of the doubt and be protected.

While we are treating the cases which look to us suspicious we must not neglect the child that has been exposed to the infection, though seemingly to be in good health, may in 24 hours develop true diphtheria. It was not an uncommon event in years past for this infection to seize every child in the same family and those within close proximity. By the administration of a small dose into

the child that has been exposed we can produce a condition of immunity which protects a child against invasion of the bacillus. Proof of the virtue of antitoxin to protect a child against diphtheria can not be denied, for it is a rare thing for more than one child, in the same family to become infected during the same epidemic.

No ironclad rule can be followed in dosage; the physician must use his best judgment in that direction.

It is important to recognize that antitoxin can not repair the injury already done by the toxin, for the curative action of antitoxin consists not alone in the neutralizing the circulating toxin but in tearing away the toxin bound to the tissue cells and neutralizing it. A great excess of antitoxin is necessary to effect this. In treating a case of diphtheria it is necessary to give enough antitoxin to completely neutralize the toxin of diphtheria, since laboratory experiments prove conclusively that animals receiving an insufficient amount of antitoxin to neutralize the toxin die as surely as those receiving no antitoxin, and since we possess no means of determining the various amount of toxin that has been secreted by the bacillus, the only safe rule is to give sufficient antitoxin to produce the following changes: The shriveling of the membrane, the odor becoming less fetid, the softening of the glandular swelling, strengthening of the pulse rate and a general amelioration of all symptoms and the patient improved; until all these conditions are observed you have not given sufficient antitoxin and a repeated injection of double the initial dose should be made until the above results are obtained.

In view of the fact that diphtheria attacks the delicate structures of the throat and nasal passages, it is not necessary to go into the varieties and locations of the membrane, sufficing to say, however, that the location of the membrane is an indication of the severity of the attack upon which will somewhat depend the prognosis. A case of laryngeal diphtheria, or membranous croup, as it is sometimes called, is much more serious than the pharyngeal variety, due to the possibility of a laryngeal stenosis which if not relieved by some artificial or mechanical means, invariably terminates fatally. When the membrane covers the tonsils and uvula, profuse discharge from the nose, spots of ecchymosis on the body and extremities; cold, clammy hands and feet, a feeble pulse, and the nauseous odor of diphtheria, and after the administration of ten thousand units of antitoxin in two doses, the condition of the patient improves slightly and that after ten thousand units more have been given there is a marked abatement in the severity of the symptoms, and that when an additional ten thousand units have been given the patient is apparently out of danger and eventually recovers, under such conditions one must be convinced of the importance of giving large doses of antitoxin in the very severe and apparently hopeless cases. In the majority of instances these large doses are not required, particularly if the patients are seen early in the attack, four to six thousand units being generally enough to produce the characteristic effect on the membrane. Before the days of antitoxin there was no method of limiting the extension of the membrane.

Since we recognize antitoxin to possess its influence over any membranous condition, whether it be diphtheritic or some other derivative, we are now justified in using it in conditions produced by the streptococci and their like, producing a condition which is commonly termed a mixed infection, or better known as pseudo-diphtheria; even in these cases the antitoxin when administered in sufficient doses has undoubtedly had great influence in that it cuts short their attack and lessens the extent of the membrane. I will refer briefly to a case reported from the Boston City Hospital, in which a child of three years old received in three doses the total of 45,000 units with complete recovery at the end of the fourth day. There are other cases equally interesting in which no doubt many of you are equally as well posted.

In the ordinary cases of diphtheria, such as faucial, tonsillar, etc., when the serum treatment is began early, I believe in administering at least 3,000 units.

If seen later and the membrane extensive, or disposed to spread, give at least 5,000 to 8,000 units as the first injection, and repeat within twelve hours if no results are obtained.

In all cases of nasal or laryngeal diphtheria, membranous croup, administer 5,000 units for the initial dose, to be repeated within six hours, unless favorable results follow the first injection. If seen later and the symptoms of asphyxia seem imminent, 10,000 units should promptly be administered and intubation immediately performed.

Upon the results on the mortality following the use of the antitoxin I can not speak from personal experience. In the Boston City Hospital prior to 1895 the death rate was 46 per cent., and in 1900 they had reduced it to 12 per cent. The United States health department in 1902 reported 15,792 cases which received the antitoxin with 1,860 deaths, case fatality of 11.8 per cent., and 722 of these were moribund when injected. If these were deducted the percentage of mortality would be reduced to about 7.5 per cent.. The average mortality where antitoxin was used in 1902 was 6.48 per cent., and where antitoxin was not used the mortality reached 32.5 per cent.

As to the method of administration, we are familiar with the hypodermic injection, which, when under aseptic condition, is practically void of danger. Any part of the body where the skin is loose may be selected, the best place being between the scapulae, as the patient can not witness the injection, and is therefore less likely to be frightened. It is well to take this precaution in every instance where hypodermics are given to children, especially in diphtheria, because the heart is always affected by the toxin of the disease, and care must be exercised to prevent excitement, for so slight a thing as a needle puncture may produce death. In recent years some members of the profession recommend it given by the mouth and by the rectum. I have never seen this method used, in three years of hospital experience, and know nothing of the results following this method of administration.

#### MORGAN COUNTY.

At the annual meeting, held in December, the following officers were chosen: President, Dr. Charles Cole; vice-president, Dr. Edward Bowe; secretary, Dr. George Stacy; treasurer, Dr. A. L. Adams; censor for three years, Dr. H. C. Woltman; alternate delegate, Dr. E. L. Crouch. The retiring president, Dr. David Reid, in reviewing the work of the past year, referred particularly to the more active part which is being taken by physicians in fields of preventive medicine. The yet unfruitful efforts of the profession in Jacksonville to secure a more efficient city health board were alluded to and the work of bettering existing conditions was handed down to future administrations of the society.

The librarian, Dr. Carl E. Black, reported a substantial growth and increasing usefulness of the library during the year. The total number of volumes in the library now is 1,771. A number of valuable donations have been made by members and interested friends since the last report. Other counties are now contemplating the adoption of our index of current medical literature.

#### *Regular Meeting, held Jan. 14, 1909.*

The just subsiding epidemic of scarlet fever at the School for the Deaf furnished the subject for discussion, which was considered as follows: "History of Epidemics at School for the Deaf," Dr. W. K. McLaughlin; "Bacteriology of Scarlet Fever," Dr. Grace Dewey; "Otitis Media in Scarlet Fever," Dr. Byron S. Gailey; "Nephritis and Scarlet Fever," Dr. Josephine Milligan. Drs. Pitner, Norbury and Adams discussed the papers offered.

*Reports of Cases.*—Dr. David Reid reported a series of diphtheria cases and illustrated the effectiveness of prophylactic doses of antitoxin upon others closely associated with those infected. Dr. C. E. Black, a case of sacroiliac dislocation. Dr. J. A. Day, resection of pyloric half of the stomach for carcinoma.

GEORGE STACY, Secretary.

**PULASKI COUNTY.**

The Pulaski County Medical Society held its regular annual meeting in Mound City Wednesday, Jan. 6, 1909, at 1 p. m., with the president, Dr. Hall Whiteaker in the chair. After the regular routine of business was transacted the old officers were re-elected by acclamation for the ensuing year as follows: President, Dr. Hall Whiteaker, of Mound City; vice-president, Dr. L. F. Robinson of Ullin; secretary-treasurer, Dr. M. L. Winsted of Wetaug; board of censors, Drs. J. F. Hargan, Mound City; W. C. Rife of Villa Ridge, and A. W. Farr of Grand Chain.

The regular programme was then taken up as follows: 1. Transaction of regular business. 2. Address of retiring president, Dr. Hall Whiteaker. 3. Election of officers for the coming year. 4. Paper by Dr. H. C. Brann, of Mounds. Subject: "Why the Young Physician Should Ally Himself With the Medical Societies." General discussion. 5. "Where Should the Young Doctor Locate for the Practice of His Profession." By Dr. C. J. Boswell of Mounds. General discussion. 6. "Shall the Physician Become a Specialist or do General Practice? And When Should He Begin?" By Dr. L. F. Robinson, of Ullin. General discussion. 7. "The Best Way of Collecting the Doctor's Fees." By W. C. Rife, of Villa Ridge. General discussion.

Though some of the writers were absent, the subjects were discussed by all present and the meeting proved a very successful one and quite instructive. Dr. A. W. Farr was much in favor of the society meeting oftener than quarterly. Dr. Will Whiteaker, of Pulaski, made an address in which he advocated for a more moral life among physicians, deploring the habit of drink, and especially that of swearing, common to some members of the profession, and claimed that the doctor should lead a clean life and keep a clean mouth. Dr. Farr endorsed his sentiments warmly. Dr. Hall Whiteaker concluded the meeting with an address in which he invited the society in a body to come to Mound City next summer and have a basket dinner under their fine shade trees at his expense. The society then adjourned until the next quarterly meeting in April.

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**RANDOLPH COUNTY.**

The Randolph County Medical Society met at Red Bud, Ill., Dec. 9, 1908. This was a special meeting, as it was convenient for Dr. J. W. Pettit, president of the State Medical Society, to be present. Chairman Dr. H. L. Gault presided. Those present were: Drs. Seely, Dinges, Smith, Saulanear, Brands, Meyer, Urban and Steele. Dr. H. L. Gault presented a very interesting case of extensive compound fracture of tibia and fibula, treated by sand-box and bichlorid of mercury solution, as follows: "I here present to you a case which demonstrates some of the things that can be done by conservative surgery. This man, Mr. L., is a driver in one of our local mines; his duties are, with the assistance of a mule, to bring the coal in the pit-car to the shaft to be hoisted above. One of these pit cars, when loaded with coal, weighs three tons. On the morning of August 24, while making a trip, the car went upon a switch and the mule upon the main track; this caused the car to leave the track and strike the rib, crushing Mr. L.'s leg between the corner of the car and the coal. The result was this leg (not just as you see it now) but with eight inches of this part extending downward from one and a half inches below the tuberosity of the tibia to about three inches above the ankle joint, this part was pulverized, a series of compound comminuted fractures of both tibia and fibula with six open wounds where the ends of bone protruded and the soft parts pulped. Upon examination at the mine amputation was thought to be the only remedy, but upon a further consideration we thought that as the blood supply was probably good in the part posterior to the bone, and believing the peroneal and posterior-tibial arteries to be unbroken, if some way could be devised to bring and keep the pieces of bone in or near apposition, there might be a possibility of saving the leg. What to use was the question. The dressing must of necessity be one that would allow the



open wounds to be seen and dressed, which excluded the ordinary first dressing, so we devised this, a long fracture-box extending from the middle of thigh with foot-piece and falling sides. The leg was placed in the box upon a piece of muslin, the foot was made fast to the foot-piece, the sides brought up into place and extension made upon the foot-piece, and when the part was extended fully and the fragments brought somewhat into place, sand was packed into the box. Where an angle of the bone was seen, the sand was packed with the fingers until the angle of the bone was seen, the sand was packed with the fingers until the angle was brought into line. The weight of the sand and box was all the extension needed, the wounds were now dressed with bichlorid pack and kept constantly wet with a one to five thousand bichlorid solution. This box dressing was kept upon the leg for forty-two days, when it was found that there was sufficient union to allow it to be placed upon a splint and the man given a pair of crutches, since which time the improvement has been steadily progressing, and, as you see, he will soon be able to walk without assistance. I used sand because it was clean, would not become lumpy or sour from the drainage from my dressing and for the reason that with my fingers I could pack the sand closely about the limb holding the fragments in place."

Dr. Pettit gave a very interesting talk about having a thorough organization of the County Medical Society; how to encourage good meetings and the advantage the doctors would derive. A vote of thanks was tendered Dr. Pettit for the information derived from his talk. This meeting will be the regular quarterly meeting of the society to have been held in January. The following officers were elected for the ensuing year: Chairman, Dr. H. L. Gault; vice-chairman, Dr. A. L. Brands; secretary-treasurer, Dr. A. W. Steele.

Chester was selected for the next quarterly meeting.

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#### ROCK ISLAND COUNTY.

The usual meeting of the Rock Island County Medical Society was held at the Hotel Harms, Rock Island, Ill., Dec. 8, 1908, at 8 p. m. The resignation of Dr. Youtz as secretary was read and the president appointed Dr. Snively to fill the unexpired term. Under clinical cases an interesting specimen of gunma of the brain was presented by Dr. Ostrum. The scientific program was then taken up as follows: A symposium on Pneumonia: "Etiology and Pathology," Dr. Williams; "Symptoms and Diagnosis," Dr. First; "Treatment," Dr. G. L. Eyster. The papers were well received and an interesting discussion followed, in which Drs. Craig, Hollowbush, Wiggins, Lamping and Gardner took part. The business meeting was then taken up. After the allowance of bills, the name of Dr. A. N. Mueller was voted upon and he was unanimously elected to membership.

A motion was made that a committee be appointed to seek to get regular price for contract lodge work. This was tabled. After an extended discussion of the evils of contract lodge work at ridiculous rates such as \$2 per year per family, this was selected as most unjust both to the physician and the people, because skillful medical attendance can not be furnished for such a pittance. Therefore, as this was regarded as degrading to the profession and not for the best interest of humanity at large, a motion was made "that the secretary be instructed to send notice to each member that a physician can not do contract lodge work for less than the regular minimum fee (as given in the Rock Island and Moline fee bill) and belong to the Rock Island County Medical Society." This was carried.

A motion was made and carried that a committee be appointed to inquire into contract work in general and to report at the next meeting. Drs. Ludewig, Gardner and Ostrum were appointed. The society then adjourned.

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#### SANGAMON COUNTY.

The regular meeting of the Sangamon County Medical society, called for January 11, was postponed on account of inclement weather. The postponed meeting was held at the Lincoln Library, in Springfield, on Monday evening, January 18.

The president, Dr. Walter Ryan, presided. The general subject for the meeting was diphtheria under antitoxin treatment, the papers presented being designed to draw out a discussion of the various changes in the management and treatment of diphtheria cases since the introduction of antitoxin.

The program included the following subjects: "The Dosage and Administration of Antitoxin," by Dr. R. D. Berry; "The Local Treatment of Diphtheria When Antitoxin Is Used," by Dr. H. H. Tuttle; "The Effect of Antitoxin Upon the Complications of Diphtheria," by Dr. I. W. Metz; "Remarks Upon Intubation and Tracheotomy," by Dr. E. E. Hagler. Drs. Tuttle and Hagler were absent, but the subjects assigned to them were informally discussed by the members present. In the general discussion which followed the presentation of the papers the following members took part: Mrs. L. C. Taylor, S. E. Munson, Charles P. Colby, George N. Kreider, Chas. S. Nelson, Walter Ryan and Geo. T. Palmer, all of Springfield, and Dr. G. E. Lutyens, of Buffalo.

In the discussion there were several most interesting reminiscent talks on the history of diphtheria in Sangamon county. A particularly fatal epidemic of "black diphtheria," which occurred north of Springfield many years ago was described; the members were told of the introduction of intubation and the administration of antitoxin and the numerous difficulties which attended their early use. Dr. G. E. Lutyens, of Buffalo, reported a recent case of diphtheria in which 147,000 units of antitoxin were used before the disease was controlled.

Two interesting pathological specimens were presented by Dr. Charles P. Colby.

GEO. THOS. PALMER, Secretary.

#### METHODS OF DIAGNOSIS.\*

JAMES B. HERRICK, M.D.

Professor of Medicine, Rush Medical College,  
CHICAGO

I have thought the subject of methods of diagnosis was an appropriate one to bring before you on this occasion because it was one that would interest a body of medical men embracing general practitioners of city and country, surgeons, internists and specialists; in the second place, because there are certain respects in which, as it seems to me, there are prevalent misconceptions concerning the proper methods of diagnosis, and lastly, because the topic is a timely one and is just now exciting a good deal of interest as witness many magazine articles in different countries, as well as discussions in some of our leading societies. So even at the risk of repeating what may already be called trite, I venture to speak on this topic.

It would be interesting and instructive did time permit, to review the historic development of various methods of diagnosis. We should find in Hippocrates a close observer of his patients and in witness might recall the *facies* designated by his name; Galen was also a close observer, and in addition paid some attention to morbid anatomy and primitive experiment. We should find the middle ages largely concerned with superstition and respect for authority, viz.: Hippocrates and Galen, rather than with a study of the patient. The English Hippocrates, Sydenham, would be found reviving close clinical observation. And, then, we should find the influence of anatomy and morbid anatomy, with Morgagni as a leader, throwing more and more light on the phenomena of disease. We should have impressed upon us the force of the impetus given by the French school in the early part of the last century, as we read how Corvisart rescued from oblivion Auenbrugger and percussion, and how Lænnec created the art of auscultation, but more important still, interpreted his auscultatory findings in the light of the autopsy. We should read the long roll of

\*An address delivered at the ninth annual meeting and banquet of the Sangamon County Medical Society, Springfield, Nov. 9, 1908. Reprinted from the Journal of the Michigan State Medical Society.

his successors in skilled physical diagnosis with such names as Skoda, Traube, Oppolzer, Flint, etc. And we should see Richard Bright calling attention to a more careful study of the urine, again with control of the interpretation of clinical findings by those of the autopsy. Virchow would appear with his powerful influence in directing attention to the study of the morbid anatomical changes in disease and his conceptions of the cell, all of which influenced much the methods of diagnosis and brought the microscope more prominently forward as an accessory. And clinical entities and diagnostic signs would spring up here and there, described by the pen of an Addison, a Basedow, a Trousseau, an Argyll-Robertson or a Weir Mitchell. And then, there would be seen bursting in on the medical world the science of bacteriology giving us new conceptions of the causes of disease, new interpretations of their phenomena and adequate explanations for many hitherto mysterious complications. Following directly in its wake comes the diagnosis of disease by detection of causal organisms, the diagnosis by surgical operation made possible because of the application of the principles of asepsis, and the diagnosis by specific serum reactions. Hardly had the medical world gotten its second sight after the blinding glare of bacteriology, before it was again dazzled by the *x*-ray with its possibilities in the way of diagnosis. Instruments and methods of precision have multiplied at such an astonishing rate, chemistry in all its branches, general, physiologic and physical, has announced so many aids to diagnosis, and the function of different organs has been tested in so many and such varied ways that the general practitioner who, thirty years ago, was well informed, fairly gasps for breath as he tries to read his up-to-date medical journals or to follow a discussion in a society and he retires at night disheartened, bewildered and perchance has a nightmare in which megaloblasts are sporting with amino acids and complements while a trypanosome with a tremendously long tail at the end of which is a plasma cell, is working a cryoscopic apparatus from which are issuing *Ds* and *ds* in inextricable confusion, while all the time an *x*-ray machine is spitting fire at him and a surgeon with a knife stands ready to do an exploratory operation, calling out "What's his opsonic index?" "Let me know first his opsonic index." No wonder he looks worn and tired and gives way to despair as he tries to grasp it all.

Now no one human being can be expected to be an expert in the use of all the various means of diagnosis. He who tries it soon loses his bearings and is hopelessly lost. Without attempting a philosophic disquisition on the broad topic of methods of diagnosis and without assuming that I have the Ariadne thread to guide all wanderers through this perplexing maze, I wish to bring to your attention a few practical thoughts that may be of service to one in one way and another in another, and may possibly help some wanderer from going astray.

I am led to do this in a measure because, as I have said, I feel that there is in a sense a mis-conception on the part of the practitioner, of the place played by the laboratory and by so-called instruments and methods of precision in diagnosis, and a certain estrangement of laboratory and bedside that is very unfortunate.

Practitioners untrained in laboratory work are apt to look upon the laboratory as infallible, and as the only scientific branch of medicine because so largely concerned with the exacter branches, e. g., chemistry, physics, anatomy, physiology. But they overlook the fact that much of the laboratory is still empiric. Think for a minute of certain laboratory diagnoses. Take the blood in pernicious anemia, or better still, in acute lymphatic lekenia. What is it that we see? What is the meaning of those large mononuclear cells in most of the acute cases, but of the smaller forms in another, and of their promiscuous mixture in a third case? Why are there few eosinophiles? What is the cause, the significance of all this? We are diagnosing by little more than a mere collation of observations. In just the same way was it learned that there is a difference between the rash of typhoid and typhus, though it took the genius of a

Louis, a Gerhard and others to make this fact generally known. Is it not in both instances largely empirical? Pathology tells us a certain section is from a carcinoma, another from a sarcoma. But what are these in their inherent natures? We know much, the help to diagnosis by a microscopic study in the case of tumors is enormous and invaluable, but is it not still largely empirical, just as our study of the location, manner of spread, consistency, etc., of the tumor on the body is empirical? And so even with the Widal reaction, or the diazo reaction; there is much of the empirical or purely experimental clinging to these laboratory methods. Even the laboratory is still busy collecting facts and instituting comparisons. Generalizations into true laws are still rare.

The practitioner too often overlooks this and places far too great dependence on the result of the laboratory finding because he regards it as more accurate and scientific than it really can be or claims to be. His disappointment is keen, therefore, when the laboratory man honestly declares his inability to make a positive diagnosis, or his resentment is great if the laboratory man on too slim a basis rashly ventures an incorrect diagnosis. Thus there is in some doctors a certain overestimation of the value of the laboratory in diagnosis and in others an unwarranted distrust of the same.

Certain limitations of the laboratory are inherent in the method aside from the personal equation due to errors in judgment or to haste and carelessness on the part of the operator, and should be frankly acknowledged by the laboratory worker and clearly understood by the physician. It is not necessarily a fault of the laboratory if the sputum examination shows no tubercle bacilli, even though the patient has pulmonary tuberculosis. The particular specimen may not contain them. A suspected typhoid perforation is reported from the laboratory as accompanied by only five thousand leucocytes in the blood. It is not the fault of the laboratory that the physician on this finding incorrectly excludes perforation. If the laboratory says the bacteriologic study of the blood shows no micro-organisms and yet the present and subsequent history shows ulcerative endocarditis, pyemia or pneumonia as the case may be, it is not the fault of the laboratory. The trouble is that the method of examination is one that is not infallible; it is largely empirical. And the mistake comes because the practitioner and perhaps the laboratory man do not recognize these limitations or do not differentiate as they should between the interpretation of so-called positive and negative findings. The finding of tubercle bacilli in sputum is a very different thing from failing to find.

The physician should have training enough in the laboratory to understand the difficulties under which work is there done, the possibility of error, the impossibility of always reaching results that are positive. The laboratory worker should have a practical training as a physician, at least a training as a hospital interne so as to realize the difficulties under which the doctor is working, and the important bearing the laboratory report will have on diagnosis. The laboratory worker, the practitioner and the patient should be in close touch. The laboratory man should be a consultant, willing to take his share of the responsibility, but no more than his share of such responsibility and entitled also to his reasonable fee. The final interpretation of the laboratory finding is with the physician. This finding represents one of the symptoms or signs, if you please, in the total symptom-complex presented by the disease; it may be a symptom of slight importance, it may be of overwhelming importance outweighing that offered by anamnesis and examination of the body. But the final summing up should be done by the physician, aided as far as needed by the laboratory worker.

The remedy for this lies, as you see, in better training in our colleges in laboratory work and the continuance of this work by the doctor when in private practice, and it is a pleasure to see that more and more attention is being paid to this. Certain laboratory reactions and technic should be as much the common property of every practitioner as ability to use the stethoscope or the



obstetrical forceps. Ordinary chemical and microscopic examinations of urine, stomach contents, feces; the morphologic study of fresh and stained blood and of exudate; the recognition of commoner bacteria; these are, or should be, no longer the exclusive privileges or duties of the laboratory man. In exceptional cases requiring special skill in interpreting findings, or unusual stains or apparatus, the laboratory expert or laboratory specialist must be consulted just as the ophthalmologist is, when the practitioner is puzzled about the appearance of a retina. So, thorough undergraduate laboratory experience is necessary in order to prevent some of these misconceptions on the part of the practitioner. Then, when in practice there should be not only further study, but as he grows busier and busier he must associate with him some young man fresh from the laboratory, giving him practical experience at the bedside, but letting the young man keep *him* fresh in the advances that have been made since he himself graduated. Several doctors may combine to secure the services of such a young man of exceptional laboratory training, or county or district laboratories might be established; but as I have insisted, the closer the laboratory to the patient the better, and so where possible each doctor should have his own private laboratory, each attending man in the hospital staff have his; at least each department in a hospital and the clinic of each department of a college should have its own laboratory.

There is another tendency that is sometimes seen that is harmful. We doctors are very gullible. We are poor business men. A promoter comes along, shakes a gilded bauble in front of us and like little children, caught by the glitter and tinkling of the tinsel stuff, we grab at it, thinking it pure gold, and our hard-earned money is sunk in a useless patent or in a mining scheme. So as regards new drugs. We believe, or at least practice as though we believed, that what the commercially interested drug house says—provided it is in print and especially if it has the stamp “made in Germany”—is true, and we prescribe a new drug as a cure for this or that disease, never stopping to think whether what we are doing has any basis of reason or common sense, or whether it may not be harmful. And we are inclined to do much the same thing in the way of new methods, instruments and technic pertaining to diagnosis. If it have the laboratory or hospital stamp upon it, particularly one of foreign mark, we are apt to accept it as reliable; it is the latest thing out. Comparatively rarely do we find the commercial bane in such new devices, though occasionally we see it as in new instruments, or new chemical reagents. But usually it is the desire of some laboratory or clinical man to get a little reputation and to get into print early that causes him to make a premature announcement that leads scores or hundreds of innocent practitioners who do not carefully weigh his statements, or test the method in a critical manner, in their laboratories and at the bedside, to accept his statements as true, and then when experience shows them to be false, to grow distrustful and skeptical against the laboratory and the hospital man in general.

I hope I shall not be understood as setting a low value on the laboratory and instruments of precision as aids in diagnosis. Everyone must admit that properly used they are practically indispensable. But I wish right here to make a plea for some of the older methods that ought not, as it seems to me, to be relegated to such an insignificant and minor position as is too often the tendency.

A comprehensive diagnosis implies the use of the most important instrument of all, viz., the brain. It involves a process of reasoning. From long experience the quick-witted physician may reach his conclusion by leaps and bounds and appear to make an intuitive diagnosis; he “sees at a glance” what is the trouble. But even this involves a mental process, rapid though it may be, and it means that there have been many previous similar processes of reasoning in other similar cases. A careful consideration of the past history—anamnesis, the present condition—status præsens, with a complete and detailed physical examination, together with a summing up and linking together of them—an inductive

process—all this is implied in a diagnosis. And, then, a diagnosis, to quote the words of one of our number, is more than a mere labeling of the disease; it is the detection of the disease in this particular individual, its location, extent, intensity, severity, etc. It involves a study of the individual make-up, the condition of other organs than the one chiefly affected, the patient's probable ability to withstand, as shown by family tendency and behavior in other illnesses. Ability to make a diagnosis of this sort implies training in the eliciting of the history, skill in observation of phenomena and trained, erudite touch, ear and eye and even nose. The finding of tubercle bacilli in the sputum may settle the diagnosis of pulmonary tuberculosis, but only the history of the case, the study of the physical signs, the effect upon the blood, pulse, weight and general health, etc., enable the physician to make a *real* diagnosis, to have real knowledge of the disease, to make a well-founded prognosis and to advise a rational therapy.

Have you not noticed the difference in skill of two physicians in the matter of getting a history from patients? One, perhaps with his mind made up as to the nature of the ailment, asks leading questions, checks the patient who volunteers what seems to be needless information and gets either a hodge-podge or a history with essential details omitted. The other in an orderly, quiet way while keeping the patient from wandering into history clearly irrelevant, in a short space of time gets a succinct account of the salient features, with minutest details where they could possibly throw any light on the present illness. He is a lawyer examining the witness who may be a willing or unwilling one anxious to tell too much or eager to conceal unpleasant or disgraceful facts. But unlike the lawyer, he is not an advocate trying to bring out only one side of the case. A certain native tact, an ability to get along with people and to understand human nature here counts for much. The young interne in the hospital one day stood aghast as the patient related to his attending man stories that had an important bearing on the present disease. A hint brought out a history of alcoholism, another an admission of an initial venereal lesion years ago, a brief question the fact of an old pleurisy, etc. Unable to stand it longer the abashed and angered interne turned to the patient and said: "I don't see why you patients haven't more sense. Why didn't you tell me these things when I was writing your history last night? You've told the doctor more in five minutes than you told me in thirty." "Well, sir," said the patient, calmly, "because you never asked me, and besides you never gave me a chance."

And you have seen the patient whose case has been carefully investigated by the recent graduate fresh from the laboratory; a bacteriologic examination has been made; the blood has been studied; so also the stomach contents, the fluid from the chest, the urine; the blood pressure has been estimated and sphygmographic tracings have been taken; the eye-grounds have been looked at, yet the illness is mysterious. Then have you not seen the older man come along, review the carefully written history and give it a deserved compliment, and then deliberately and as an expert palpate the abdomen and demonstrate a mass, describing its location, size, contour, degree of hardness, mobility and its other characteristics? The mystery is solved. All the other findings fit in perfectly with this one and group themselves about it. Laboratory methods and instruments of precision have contributed to the diagnosis, but the central unifying fact was discovered by the old-fashioned *tactus cruditus*. Just as in chemistry a solution saturated, or even super-saturated, may refuse to give up its crystals until inoculated, as the chemists say, by a small crystal of the substance, the mass of facts known concerning our patient refused to show any orderly or comprehensive arrangement until touched by the sensitive hand of the skilled examiner.

The notion that laboratory methods are to render useless and obsolete the old and tried inspection, palpation, percussion and auscultation, is harmful in the extreme. Yet this prevails, and even in our colleges we see this tendency to put in the background physical examination. von Noorden complains that

in Germany many of their graduates are now-a-days poorly grounded in the art of auscultation and percussion, the fundamentals of diagnosis, and urges that this art be not neglected. Because tubercle bacilli may be found in the sputum in pulmonary tuberculosis, we should not rely entirely upon that as the diagnostic criterion, and so be careless in the detection of an apical infiltration, but should be spurred on to greater care in our physical examinations, as now the accuracy is controlled by the sputum examination, and we shall thus learn to be able to interpret more definitely what we feel and hear than ever before. Let the *x*-ray confirm our suspicion of a small aneurism. The next time we shall be bolder in declaring the significance of certain otherwise obscure physical findings. The laboratory method or instrument of precision thus becomes, as it should be, an adjunct of bedside history-taking and physical examination, and does not and should not displace them or lower their dignity.

And let me add another thought. I believe there is in many quarters a tendency to put the study of morbid anatomy too much in the background. Bacteria, lymphocytes, Kjeldahls, electric conductivity of body fluids, free hydrochloric acid, antibodies, plasma cells, opsonins are worthy of most careful study—but after all, the basis of the greater part of our diagnosis is the recognition of deviation from the normal in the location, size, consistency and physical properties, of various organs, together with alteration in function that may attend such pathologic condition. Normal and pathologic anatomy, together with normal and pathologic physiology, are the indispensable essentials for a proper study of the body in these respects, and must in the nature of things remain so. The ability to palpate a large spleen and to identify it as such enlarged organ, will never, I believe, be relegated to a position of unimportance by the discovery of any number of bacteria, or by any blood finding or chemical reaction, though even now some of these methods of examination assist materially in the understanding of the nature of the splenic enlargement, and it is to be hoped many more aids will be discovered.

Neusser, one of the acutest diagnosticians of Europe, a man who fully recognizes the value of the laboratory as an adjunct to clinical medicine, a pupil of Hoppe Seyler, the chemist, says: "Yet even to-day pathologic anatomy still remains the mistress of the art of diagnosis; it is she who determines our decisions at the bedside."\*

There is another reason why we must cultivate the art of critical observation and physical examination by the unaided five senses. Over and over again we are called upon to make a quick, on-the-spot decision as to the nature of an illness and its appropriate treatment. The case is one of emergency, time for the laboratory or instrumental diagnosis is not allowed by the remoteness of the laboratory—or the tedious character of the method of examination precludes its employment. The doctor must rely on himself. His training in close study of the phenomena of disease and in physical signs is here his only reliance, and his success or failure depends largely on this previous bedside training. To stop to draw the urine and test for morphin in a case of supposed opium poisoning involves a dangerous delay; the pupils and respiration and other signs must be the guide. The critical study of the twenty-four hour urine, including eryoscopy perhaps, is advisable in a case of uremic coma, but the skilled man is reasonably sure of his diagnosis from a few well-put questions to the friends, the study of the heart and vessels, the odor of the breath with perhaps a glance at the retina, for the ophthalmoscope ought really to be a pocket instrument as well as the stethoscope and hypodermic syringe, and he institutes prompt treatment. A hemorrhage from ruptured tubal pregnancy, obstetrical emergencies, intestinal obstructions, some cases of diphtheria, angina pectoris, these and many other conditions need quick diagnosis. The time is not allowed for detailed study of the blood, the blood pressure, the urine, or the bacteriologic study of exudates.

\* Edmund Neusser: *Ueber Diagnostik und Therapie in der innere Medizin*, Wien, 1893.

This should not be understood as advocating a "snap diagnosis," so called. We ought always to be thorough. As a routine there should be a study of the body in its entirety in every new case. It is an old saying but a very true one, that more mistakes are made through carelessness than through ignorance. The habit of carefully eliciting of the history, thorough examination of all parts of the body, complete laboratory and instrumental investigation will enable us to eliminate a large proportion of our mistakes and to make comprehensive diagnoses. An illustration or two may show what I mean by the latter expression. A patient comes in with history of cough, emaciation and fever and an examination shows an apical consolidation and tubercle bacilli in the sputum. So far so good. But only a routine questioning as to the past history and a study of the urine may show that the pulmonary tuberculosis is a complicating event in a patient with saccharine diabetes. Or we easily make a diagnosis of pneumonia or typhoid, but make a grievous error in prognosis because not recognizing a coexisting nephritis, or a myocarditis. Or we recognize a tabes, but overlook an accompanying aortic leak or thoracic aneurism.

I might dwell upon the diagnosis by operation. It has a legitimate place. Medical men are perhaps prone to resort to it too infrequently and particularly in the way of such simple operative procedures as exploratory punctures of the thoracic cavity, lumbar puncture, the removal of glands, or of pieces of tissue as of the uterus, for microscopic examination, etc., while surgeons are perhaps too easily inclined, from their lack of dread of the operation, to resort to an exploratory or diagnostic operation before an exhaustive study of the case has been made by non-operative means.

But I have already exceeded a reasonable time-limit and must close.

I have endeavored to call your attention, and I fear in a rather disjointed manner, to a few practical features concerning diagnosis. I have tried to recognize the indispensable aid to be derived from the laboratory, to show that the practitioner must have a practical knowledge of laboratory workings, or there is liable to be a greater estrangement between the laboratory and the clinician. I hope I have made clear my belief that the laboratory should be near the bedside, i. e., truly clinical, and that its findings should be viewed as a cardinal symptom, the final decision, with this cardinal symptom given its true weight, being made by the physician, the laboratory worker being his consulted colleague. I have emphasized the fact that while all aid possible should be sought from any sensible, scientific, practical new method or instrument of precision, we should not give up the old time-honored method of clinical observation and the physical examination by the unaided five senses, because these methods have in them elements of truth. And I have tried also to show that a diagnosis is not yet—we hope may never be—a process where all is mechanical and where no logical thinking is necessary, where we shall be, as Weir Mitchell puts it, "dementalized." May I add in conclusion just one word more? You have perhaps had the experience—we all have—of having studied your case as you thought carefully. You have called in some one to aid. He confirms your findings, but goes one step farther than you: he secures the one fact that was lacking, or by rearranging your facts brings order out of chaos. You say he is a genius, he has a native knack in such matters. Now, don't believe it. Only once in a great, great while does the real genius appear. The secret of your colleague's success is explained by that one little word that has been called by one of our most honored medical leaders, William Osler, the master-word in medicine. It is the word "work." It is after all the real secret of successful diagnosis. It is the man who plods in his laboratory, digs at his books, re-examines his patient and again digs, it is the man who works who wins.

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#### UNION COUNTY.

The Union County Medical Society held its annual meeting Wednesday, Dec. 30, 1908, at Anna, Ill., President Dr. D. W. Gear presiding. Eight members responded to roll call. The minutes of the last regular meeting (November 25)



and of the special meeting (December 10) were read and approved. The special meeting was held in honor of Dr. J. W. Pettit, president of the state society, who delivered a splendid address to the local society upon the subject, "Organization." The secretary read his report and stated that during the year since January 1, 1908, the meetings had been changed from quarterly to monthly; that the membership had increased from 14 to 22, with two elected at this meeting (Drs. F. W. Willard and T. J. Rich, both of Anna, Ill.); that while the society had no regular place of meeting at the beginning of the year, it now holds its regular meetings in the science room of Benton Hall of Union Academy, the Executive Board of the school granting the use of any room for it use; that while the expenses of the society during the past year were greater than any previous year, yet the officers kept the expenditures below the receipts, leaving a small balance in the treasury.

The following officers were elected for the ensuing year: Dr. W. E. Lingle, of Cobden, Ill., president; Dr. T. J. Rich, of Anna, Ill., vice-president; Dr. E. Vincent Hale, of Anna, Ill., secretary-treasurer.

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#### WABASH COUNTY.

A special meeting of the Wabash County Medical Society was held Monday, December 21, at 3 p. m., at St. Jerome's Hall, Mt. Carmel. Meeting called to order by Dr. R. J. McMurray. The following members were present: Drs. R. J. McMurray, St. Francisville; C. E. Gilliatt, J. J. McIntosh, Allendale; A. D. French, Linn; J. B. Maxwell, S. W. Schneck, J. C. Utter, P. G. Manley, L. J. Lischer, R. S. Manley and W. E. Muer, Mt. Carmel; visitors: Drs. G. W. Reed, Lancaster; J. E. Inskeep, J. E. Smith and C. E. Martin, Mt. Carmel. F. H. Bimes and Jay Lescher, students of medicine were also present. The object of the meeting was to give Dr. J. W. Pettit, of Ottawa, who, in the capacity of president of the Illinois State Medical Society, is visiting the different counties of the state, the better opportunity to find out the needs of the profession and to impress upon them the need of medical organization and the great benefits to be gained by a perfected organization of the medical fraternity. Dr. Pettit's address was timely and appreciated by all present. The members will certainly be stimulated to better efforts in the interest of the society and will be enabled to secure several new members on the strength of Dr. Pettit's visit. This is indeed a worthy cause which Dr. Pettit has undertaken upon his own responsibility and is deserving the support of the State Society. It is to be hoped that at the next annual meeting of this society the necessary steps will be taken to appropriate a sufficient sum annually to be used by the succeeding presidents in visiting particularly the parts of the state which are in need of the counsel and presence of the chief officer, to promote and stimulate the work of organization, so that none may die. The increased growth will undoubtedly in a great measure take care of the expense.

At 7 o'clock a public meeting was held at the Court House under the auspices of the society. Through the ministerial association the superintendent of the city schools and the daily papers the society was enabled to have a full house and an appreciative audience.

Dr. Pettit gave an address on "Tuberculosis" and made an impression on the laity which no doubt will bring forth fruitful results.

DR. R. J. McMURRAY, President,  
DR. W. E. MERCER, Secretary.

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#### WHITESIDE COUNTY.

The Whiteside County Medical Society held its regular annual meeting in Sterling, Dec. 23, 1908, Dr. C. G. Beard, the president presiding. The minutes of the previous meeting were read and approved. The following were present: Drs. Durkee, Schmalling and Hensinkfeld, of Fulton; Drs. Sullivan, Fitzgerald

and Nowlen, of Morrison; Drs. Dow and Allen, of Rock Falls; Dr. Procter, of Coleta; Dr. Wahl, of Tampico, and Drs. Anthony Parker, J. R. Keefer and Beard, of Sterling. Dr. Broderick, of Sterling, was voted in as a new member. Several of the members present were asked to present a brief sketch of one of their most interesting cases they had had the past year. Dr. Parker reported a case of uremia; Dr. Durkee, a case of arsenious neuritis; Dr. Sullivan, a case of poliomyelitis; Dr. Hensinkfeld, a case of pneumothorax; Dr. Procter, a case of osteomyelitis. All of which were fully discussed by all of the members. Dr. J. F. Keefer made a few remarks relative to some changes in the fee bill, which was discussed from all sides, also bringing out the fact that it had been several years since it had been raised. Dr. Anthony made a motion, which carried, that the president appoint a committee of five who should revise the fee bill and report at the next meeting. Dr. Beard appointed on this committee the following: Dr. Procter, of Coleta, chairman; Drs. Wahl, of Tampico; Keefer, of Sterling; Hensinkfeld, of Fulton, and Fitzgerald, of Morrison.

The following officers were then elected for the ensuing year: Dr. Frank Fitzgerald, president; Dr. E. L. Dow, of Rock Falls, vice-president; Dr. E. C. Sullivan, of Morrison, secretary-treasurer. The meeting then adjourned to meet in February.

### WILL COUNTY.

#### *Regular Meeting, held Dec. 10, 1908.*

The regular meeting of the Will County Medical Society was held at Hobb's Café, Joliet, Tuesday evening, Dec. 10, 1908. A four course dinner was served at 6:30 o'clock. After dinner Dr. L. Harrison Mettler, of Chicago, spoke for an hour on the subject, "Hysteria," analyzing a number of the more important recent definitions; he demonstrated the modern conception of hysteria to be an insanity of the borderland type—a disease of the ego, that has a definite group of symptoms, and can be diagnosticated as easily as any other disease with distinctive symptoms. He left with the society the idea that a diagnosis of hysteria should be made with exceeding care, with the fact in mind that it is a mental disease and not mere "devilishness." Dr. Woodruff, in discussing the subject further, told of finding the inverted color field in patients whom he believed to be victims of hysteria.

Dr. Wm. Dougall, chairman of the fee bill committee, presented a schedule of fees. The discussion brought out the fact that the schedule as presented gave too much latitude and that a discussion of the matter item by item would be necessary to arrive at an average fee for a working basis. The officers for the year 1909 were elected as follows: President, Dr. Ray B. Leach; vice-president, Dr. Hamilton T. King; secretary-treasurer, Dr. Marion K. Bowles; delegate, Dr. Watson H. Curtis; member of the medico-legal committee, Dr. Wm. Dougall; member of the auxiliary legislative committee, Dr. Wm. Richards. Members present were: Drs. Cushing, Munch, McGann, McBride, Lennon, Le Sage, Stewart, Woodruff, King, Leach, Cohenour, Steen, Bowles, Rich, Brammon, Richards, Dougall, Curtis, Fredericks and Wagner. Guests were Drs. L. Harrison Mettler and Bertha Hurd.

#### *Regular Meeting, held Jan. 12, 1909.*

The regular meeting of the Will County Medical Society was held at Hobbs' Café, Tuesday evening, Jan. 12, 1909. Dinner was served at 7:15, Dr. R. B. Leach presiding. After dinner the minutes of the December meeting were read and approved. The president then introduced Dr. Isaac A. Abt, of Chicago, who spoke on "Recent Progress in Nutritional Disorders of Infancy." Discussions and questions followed by Drs. Dougall, Munch, Richards and Wagner. Dr. Abt's speech was comprehensive and valuable and much appreciated.

Dr. Bertha Van Hoosen, of Chicago, then spoke on "Retrod displacements of the Uterus." She compared the normal uterus to a joint in that it is normally movable and showed how in inflammatory troubles it should be fixed until a cure has been effected, and then it should be again movable, being similar to the treatment of an acute joint inflammation. Any fixation should be temporary. The subject was further discussed by Drs. Ruben, Walsh, Bowles and Ferguson.

The "Fee Bill" was discussed again and the minimum price for obstetrical cases financially able to pay was decided upon.

The meeting adjourned. Twenty-eight members and visitors were present.

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## Book Notices.

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**GENERAL SURGERY.** A Presentation of the Scientific Principles upon which the Practice of Modern Surgery Is Based. By Enrich Lexer, M.D., Professor of Surgery, University of Königsberg. American Edition, edited by Arthur Dean Bevan, M.D., Professor and Head of the Department of Surgery, Rush Medical College in Affiliation with University of Chicago. An Authorized Translation of the Second German Edition by Dean Lewis, M.D., Assistant Professor of Surgery of Rush Medical College, in Affiliation with the University of Chicago. With 449 Illustrations in the Text, Partly in Color and Two Color Plates. Published by D. Appleton & Co., New York and London, 1908.

A text-book on general surgery, differing from many similar text-books in that it embodies the very latest progress in surgery.

The advance in surgery has been so rapid in the last few years that it has been hard to find a text-book teaching the latest established facts. Drs. Bevan and Lewis, in editing and translating this book, have added many notes, giving their own and other experiences on many important subject, thus making it express the crystallized ideas of America's foremost surgeons.

In Part 1 many good things are said in regard to general anesthetics. The note by the American editor on "Late Poisonous Effects of Anesthetics" shows the danger of chloroform and especially for all long operations. A very concise description of Bier's hyperemic treatment of acute inflammation is given, with a few words of warning against its use in inflammatory infiltrations which have not softened and which are accompanied by fever and have a tendency to extend rapidly. The most approved and latest methods of surgery of the tendons, nerves and blood vessels are given.

In Part 2, under wound infection, blastomycosis is given a terse description and placed in its proper category of diseases. Wright's vaccination treatment is clearly given in five pages and is interesting reading. A summary of its value is clearly stated. The subject of the opsonins is well handled. Crile's method of direct blood transfusion is given in an extract from his own article, tending to show that direct blood transfusion has a definite place in surgery.

One is delighted with the simplicity and conciseness of the book. No space is wasted with useless and obsolete methods. The latest theories, principles and practice of modern surgery are all that are given.

This book ought to be in the hands of every general practitioner and student of general surgery.

### THE MELLIN'S FOOD METHOD OF PERCENTAGE FEEDING.

The Mellin's Food Co. of Boston, Mass., has just issued a book of 183 pages, devoted to directions and formulas for the preparation of infant food in connection with the Mellin Compound. Although pertaining to the consideration of this particular food, it has much information along general lines, and can be profitably studied by those practitioners interested in this department. The work will be sent by that company to any practitioner upon request.

## NEWS OF THE STATE.

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### PERSONALS.

Dr. Juliet N. Stevens has returned from a trip to England and Scotland.

Dr. William A. Fisher, Chicago, who has been very ill at his home, is reported to be convalescent.

Dr. George S. Park, formerly of Marshall County, after a continued absence, has again returned to Varna, Ill.

Dr. J. T. McAnally of Carbondale is spending the winter at Mt. Vernon, having temporarily given up his practice.

Dr. Anthony Biankini, of Chicago, has had conferred on him by the Emperor of Austria the order of the Iron Crown, third class.

Dr. W. H. White of Hume, Ill., was obliged to discontinue his practice for a time on account of ill health and is now in Phoenix, Ariz.

Drs. Ludvig Hektoen, George W. Webster and Alice Hamilton, Chicago, have been appointed members of the State Commission to investigate occupational diseases.

Dr. James W. Pettit, Ottawa, and James A. Egan, Springfield, have been appointed by the Governor as members of the State Commission to investigate occupational diseases.

Dr. James W. Pettit, president of the Illinois State Medical Society, addressed the St. Clair County Medical Society at East St. Louis, December 10, on "Medical Organization."

Dr. James A. Sutton, the oldest practitioner of Canton, was presented with a gold-headed cane at the annual meeting of the Canton Physicians' Club Dec. 14. Dr. W. E. Shallenberger, president of the club, made the presentation speech.

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### NEWS ITEMS.

Smallpox has been reported at Canton, Ill.

Elkville has reported two cases of smallpox.

Scarlet fever has been reported at Galesburg.

Smallpox was reported in Peoria during December.

Scarlet fever is reported in several towns in McHenry County.

Smallpox is reported to be epidemic in the country near Pekin.

Several cases of smallpox have been reported in Mason County.

Scarlet fever was reported at Bloomington the latter part of December, 1908.

Highland, Ill., was quarantined during December on account of an epidemic of scarlet fever.

Health Commissioner Evans, Chicago, has gained a notable victory in securing purified milk for that city.

On January 5 Dr. T. J. Watkins was made president of the staff of Wesley Hospital, Dr. H. M. Richter, vice president, and Dr. Fred Menge, secretary.



The epidemic of smallpox and diphtheria which threatened Brown-ing and vicinity has about abated and those who have been quarantined have been released.

By the will of Dr. James G. Wheeler, Broughton, the James Milliken University, Decatur, will come into possession of his estate, estimated to be worth from \$75,000 to \$125,000.

It is reported that Dr. Robert Stuart, 5437 State street, while driv-ing his automobile December 28 was run into and his machine wrecked and the physician thrown and badly cut with glass.

Peter Rundberg is said to have been guilty of practicing medicine without a state license and to have been fined \$100. The complaining witness was an inspector for the State Board of Health.

Quarantine has been established at the Illinois Eastern Hospital for the Insane as a result of the discovery of five cases of diphtheria in the institution, three among patients and two among nurses.

The Illinois State School for the Deaf, Jacksonville, was put under quarantine by the city and state health authorities Dec. 15, 1908, on account of an epidemic of scarlet fever, of which 110 cases are said to exist.

A jury in Judge Gibbons' court on January 6 returned a verdict in favor of Dr. Henry Schmitz, who was sued for \$20,000 by Dr. George Zoeler for the loss of his foot, due to a gunshot wound accidentally inflicted while hunting.

Van Vlissingen, the forger recently convicted from Chicago and now incarcerated in the penitentiary at Joliet, is said to have sunk at least \$30,000 in the Physicians' Medical Supply Company, an organization exploiting certain patent medicines.

At a meeting of the Board of Directors of the Proctor Hospital, Peoria, held last evening, arrangements for the medical staff for the en-suing year were made and resulted in the appointment of Drs. Albert Weil, Willis, Ulrich and Corcoran.

A California doctor has abandoned fees and will hereafter serve hu-manity for love alone. The *Philadelphia Times* fancies his practice will soon grow less, for nothing so destroys a man's confidence in a physician's wares as low fees nor increases it as high fees do.

Active work has been begun by the Maimonides Kosher Hospital So-ciety to raise funds for a hospital for Orthodox Jews, to cost \$75,000. They have purchased a site for \$6,500 on California avenue, near Re-becca street, facing Douglas Park. The proposed hospital will have a capacity of 100 beds.

E. A. Kamin, an optician, is said to have been fined \$100 January 14 for practicing medicine without a license. An inspector of the State Board of Health testified that he had gone to the office of this individual complaining of a sore throat and had been given a prescription, for which he was charged 25 cents.

The new milk law which requires the pasteurization of all milk products than those from cows which have passed the tuberculin test, technically became effective January 1, but complete enforcement will require several months. Meanwhile health officials are proceeding with routine measures to secure wholesome milk.

The latest journalistic applicant for medical favors appears this month in Chicago. Its title is *Hygiene and Diet and How to Live*. It is a monthly periodical devoted to sanitary food, clothing, shelter and how to prolong life, is edited by Dr. Carl H. von Klein and published by the Hygiene and Diet Publishing Company of Chicago.

It has been reported that the school nurses under the Department of Health of Chicago have been retained for work during the year 1909. No appropriation was made for this year until active steps were taken by the department and the public, who set forth the necessity of the nurses' work in the school inspection before the City Council.

The annual report of Cook County Hospital for the fiscal year, 1908, shows that 28,142 patients were admitted to the hospital. At the beginning of the year there were 1,145 patients under treatment, and at the close of the year 1,322. The daily average number of patients during the year was 1,274, and the average daily cost for each patient was 99 cents.

The death rate for the City of Springfield for the year 1908 is estimated at 15 per 100, and during the month of December 9.1 per 1,000. Ten per cent. of deaths were due to tuberculosis. There were a number of cases of smallpox, but not a single death occurred. Five per cent. of deaths were due to accidents, many of which were caused by mine disasters.

All the proposals for the erection of the new Cook County infirmary buildings at Oak Forest were rejected Dec. 11 by the special committee. The amount at the disposal of the members for the erection of the new infirmary buildings and the tuberculosis hospital on the hospital grounds is \$2,000,000, while the lowest bid received for the construction of the infirmary alone was \$1,898,358.

Plans are being made to open a series of emergency accident relief stations in the downtown district of Chicago, to be known as the Iroquois Memorial Stations. At the meeting between Health Commissioner Evans and Dr. George J. Tobias, president of the Iroquois Memorial Association, plans were discussed for remodeling the city property at 87 Market street so that construction on the first station may be begun in May and turned over to the city on the sixth anniversary of the Iroquois Theater fire.

The new cocaine law was declared valid December 16 by the State Supreme Court in the first case referred to it since the act was passed by the legislature. The case at issue was a fine of \$500 imposed on Frank and Paul Zito, druggists of Chicago, who were convicted in the lower court of having sold catarrh powders containing cocaine. The Zitons contended that the powder was sold by a clerk, but the Supreme Court held the owners responsible. The law holds that cocaine must not be sold in "patent medicines" or any form excepting on the prescription of a physician.

The annual meeting of the State Board of Health was held in Springfield January 15. Dr. George W. Webster, Chicago, was re-elected president and Dr. James A. Egan, Springfield, secretary and executive officer. The board decided to recommend to the Governor the creation of a state sanitarium for consumptives, provided cities and villages do not take advantage of the power conferred on them of erecting municipal hospitals and further recommended the provision for a state

colony for epileptics. The board also determined to continue the crusade against consumption and to make a thorough investigation into the milk supply of the state to determine whether milk contains the germs of tuberculosis and other communicable diseases.

A judgment of \$4,000 was recently entered against Dr. M. L. Harris of Chicago in the Federal Court in favor of a man of Bowling Green, Ohio. It is said that four years ago the man came to Chicago and entered the Polyclinic Hospital as a charity patient, where Dr. Harris removed one of his kidneys. After the operation was performed the patient was attended by the regular staff of the hospital and it is claimed that a large piece of gauze was left in the wound. The jury was instructed by Judge Landis to the effect that it made no difference whether or not Dr. Harris personally made the mistake, that he was responsible for anything that happened to the patient, he having been the operating surgeon. A notice of appeal from this judgment has been entered.

The *Bulletin* of the Department of Health of Chicago gives the following statement regarding the work of the department during the year 1908: "The final showing of the work done during the year 1908 by the Department of Health is, on the whole, very satisfactory. The total number of deaths has been less; the death rate has been lower. The improvement has been greatest where it was most needed, namely, in pneumonia, consumption and bronchitis. The department has doubled its work. It has done more for the people. It has spent less money. It has collected more money for the city. Many factors have made this possible. First, the men themselves. We have a few loafers left, but the average of efficiency is higher than that of private employees. The major part of the credit belongs to the wisdom and energy of the heads and their associates in the various bureaus. The credit is generally given the commissioner, but no one knows so well as he that it belongs to the men. Second, the community is fortunate in having a mayor who is firm in his support. Third, a city council which has passed more good health legislation than any other city council anywhere has ever passed in the same length of time. Fourth, loyal support by other departments of the city government, but above all by the police department. Fifth, and the basis of it all, a broader public intelligence and a quickened public conscience. So we have gone through the year, failing and succeeding, erring and acting wisely, mistakes and right actions woven in and out. We hope Chicago is somewhat better to live in as a result of our efforts. For 1909, all working together, we will do the best we can as God gives us strength. Our community is but a child, eternal forces, worldwide in their operation, have caused her birth and growth. Now like an adolescent maiden, she begins to see new relations in life. Introspection is begun. Chicago is finding herself. For the Health Department there is more work to do than we have ever done."

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#### MEDICAL SOCIETY NOTES.

At the thirty-fifth annual meeting of the North Central Illinois Medical Association, held in Princeton December 1 and 2, the following officers were elected: President, Dr. James F. Percy, Galesburg; vice presidents, Drs. Franklin A. Turner, Sandwich, and Alfred E. Owens, Princeton, and secretary-treasurer, Dr. George A. Dicus, Streator.

Aurora physicians met December 17, organized the Aurora Medical Society and elected the following officers: President, Dr. Herman Milbacher; vice president, Dr. Robert A. Windett; secretary-treasury, Dr. William H. Schwingel, and executive committee, Drs. Edward W. Banker, Herman A. Brennecke and William P. Sherman.

The annual meeting and dinner of the Chicago Ophthalmological Society was held January 11. Dr. Thomas Woodruff, president, acted as toast master. The following officers were elected: President, Dr. Frank Allport; vice-president, Dr. William A. Mann; secretary, Dr. Willis O. Nance; councilor, Dr. Paul Guilford, and councilor to the Chicago Medical Society, Dr. Thomas Faith.

At the annual meeting of Effingham County Medical Society, held December 8, Dr. Charles F. Burkenhardt, Effingham (for the last four years secretary of the society), was elected president; Dr. Frank W. Goodsell, Effingham, secretary; Dr. Henry Taphorn, Effingham, treasurer; Dr. George J. L. Haumesser, Shumway, delegate to the state society, and Dr. Joseph B. Walker, Effingham, a member of the medical defense committee.

Resolutions adopted by the Madison County Medical Society on the death of Dr. L. F. Shuessler, of Alton, Ill.

WHEREAS, The Almighty, in his great wisdom, has removed from our midst our fellow member, Dr. L. F. Schuessler, and,

WHEREAS, This society has lost one of its active workers and the community a valuable member of the medical fraternity; be it

*Resolved*, That this resolution of our sympathy and regard for his professional ability be spread upon the records of this society and a copy of the same be sent to the surviving members of his family and to the ILLINOIS MEDICAL JOURNAL.

H. R. LEMEN,  
J. H. FIEGENBAUM.

Dr. Carl E. Black of Jacksonville delivered an address before the members of the Galesburg Medical Society at the Galesburg Club, January 7 on the "Use of Current Medical Literature." The address was of great importance to the members of the society, as they hope to adopt the system of indexing all medical journals at one central point, as is done in Jacksonville, Quincy and other places where the library boards have set aside a room in the public library for their use. A large number of physicians were present to hear Dr. Black, and a committee of three was appointed to take this important matter up and see if it can not be adopted by the Galesburg Medical Society.

The medical profession of Will County held their annual meeting and banquet Tuesday, Dec. 8, 1908, in the Hobb Café, Joliet, Ill. Following the banquet there was a discussion of the fee bill and the election of the following officers: President, Dr. Roy B. Leach; vice-president, Dr. Hamilton T. King; secretary and treasurer (re-elected), Dr. Marion K. Bowles; member board of censors, Dr. V. J. Cohenour; delegate to state convention, to be held at Quincy next May, Dr. Watson H. Curtis of Wilmington; local member State Medicolegal Board, Dr. William Dr. William Richards. The following members were at the banquet: Dougall; member legislative committee, American Medical Association, Drs. F. D. Rich, T. H. Wagner, E. R. Steen, Marion K. Bowles, W. B. Stewart, William Richards, Louisa L. Munch, M. E. McGann, W. O.



McBride, Philip Le Sage, A. J. Lennon, Roy B. Leach, H. T. King, L. J. Frederick, William Dougall, M. W. Cushing, W. H. Curtis, V. J. Cohenour and Dondus Brannon. With the exception of Dr. W. H. Curtis of Wilmington, all who attended are Joliet residents.

The seventh annual banquet of the Aux Plaines Branch of the Chicago Medical Society was held at the First Methodist Church of Austin on Friday evening, Dec. 22, 1908. Covers were laid for sixty-five and every place was filled. Dr. Charles E. Humiston acted as toastmaster and introduced Dr. Henry B. Favill of Chicago, who spoke on the subject, "The Doctor as a Citizen." Dr. Favill said that the physician as a citizen did not enter into the social life of a community as he should; that he was better prepared than other professional men to suggest and present plans for the safeguard of the public against insanitary conditions; that he lived too much within himself and too close to his own pursuits; that living as near to the home as he was forced to do made him of necessity a contributor to the social life of the community. Dr. Favill was followed by Mr. William Moss, attorney at law, of Oak Park. Mr. Moss said between law and medicine there is the best of feeling. He paid a tribute to the medical profession by picturing most graphically the life of the old country doctor, his close relationship to his patients, his influence as a citizen, and finally the tender loss to the community in his death. Rev. R. H. Fortesque Gairdner, of St. Martin's Episcopal Church, spoke on "The Therapeutics of Life." He said we did not smile enough, we did not bring enough joyousness into life. He pictured the close relationship between the pastor and the physician in the home, and defined success as Ruskin would have us to know it. The Weber Quartet furnished the music, and the repeated encores gave proof of the keen enjoyment of those present in their part of the program.

The Physicians' Club held a joint meeting with the Chicago Medical Society, Wednesday evening, Jan. 27, 1909, at the Grand Pacific Hotel. It was one of the best attended and most interesting meetings that the club has ever held. Dr. Henry B. Favill was chairman for the evening. The subject was eugenics and the following program was given: 1. "The Experimental Study of Heredity," illustrated with lantern slides, W. E. Castle, professor of zoology, Harvard University. 2. "Studies of Inheritance in the Evening Primrose," illustrated with lantern slides, R. R. Gates, professor of botany, University of Chicago. 3. "Important Lessons to be Learned from the Breeding of Animals," Eugene Davenport, dean and director College of Agriculture, University of Illinois, Urbana. 4. "Experiments and Observations on the Modification and Control of Inheritance," W. L. Tower, professor of zoology, University of Chicago. 5. Discussion opened by C. O. Whitman, professor of zoology, University of Chicago, and Charles L. Mix. The following explanatory abstract was published in the *Bulletin* of the Chicago Medical Society:

"The part that heredity plays in the development of man should be a matter of deep concern to all of us. The improvement of the races through thoughtful and mature planning, anteconception consideration, so to speak, has

not as yet received at the hands of biologists and sociologists the study and attention that its commanding importance would warrant. Biology has unfolded to us many of Nature's secrets and has established certain definite laws in relation to enginies that form a substantial foundation for the super-structure yet in the making. Curious it is that man so rarely applies the accepted principles of biological science in the procreation of his offspring, and seldom is a preliminary thought given to anything that would add to its general welfare. Indeed, man is at a distinct disadvantage when compared with such domestic animals as the dog or cat, the horse, cow, sheep or hog. These animals are carefully mated and are bred with the idea of bringing out those qualities most desired in them. While not possessing the intelligence of the human animal, they, at least, can boast of "good" breeding, which unfortunately is denied to many of us. Man is not thoughtfully conceived. He makes his entrance into this sphere in a more or less haphazard way through the more or less haphazard mating of his progenitors. He is the child of chance, and, so to speak, is born, not bred. It is, of course, a recognized fact that morally, mentally or physically, diseased parents usually transmit to their progeny their own abnormal qualities or conditions, or at least endow them with such degenerative cell changes that it remains but a question of time when this inherent morbidity will make itself manifest. It has also been definitely established that consanguinity of parents brings about the births of a very great number of defective children—deaf, dumb and blind, principally. Statistics gathered in this country by Prof. Alexander Graham Bell prove conclusively that such marriages are most frequent and important factors in the production of degeneracy. By way of analogy may be mentioned the poor quality of animal that results from inbreeding, which without doubt will be fully brought out in the discussion. While we duly recognize the unalterable law of Nature that "like begets like," what are we doing to stamp out this great evil of ill breeding in those whom we know to be physically, mentally or otherwise unfit for procreation? What precautions are taken and what control is exercised to prevent the degenerate of whatever nature from begetting his kind? A few of our states have upon their statute books laws forbidding consanguinous marriages so far as first cousins are concerned. These laws, however, are negative through the ability to consummate such marriage in some other state. So, too, has the marriage of those legally declared insane been forbidden, but further than this the state or government fails to dictate. Heredity, evolution and the science of improving the race are assuredly subjects of vast importance—they have to do with the individual of to-day and to-morrow—they are matters that directly affect the community, the state and the nation. Physicians particularly should possess full knowledge of these subjects and should lead in the teaching and application of their accepted principles. We are exceedingly fortunate in having been able to gather together for this meeting so distinguished a group of scientists, each a master in the field of biology. The subject matter for the program was considered of such moment that the directors felt that the medical profession of Chicago would appreciate the opportunity of hearing the latest and best in this field of work. To that end the members of the Chicago Medical Society were invited to meet jointly with the Physicians' Club."

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## PUBLIC HEALTH.

The public schools of Sycamore and Crystal Lake have been closed on account of scarlet fever. Rigid and thorough isolation of dairies on farms where there are cases has been established at Crystal Lake through the efforts of Dr. Harry D. Hull, Nunda, health officer of McHenry County, who has been appointed special agent of the Chicago Board of Health.

## CHANGE IN LOCATION.

Dr. L. W. Fulton of Berlin has removed to Alexander, Ill.

Dr. J. L. Church, of De Kalb, has removed to Geneva, Ill.

Dr. P. K. Andrews, of Atwood, has removed to Clinton, Ind.

Dr. E. M. Minnick has removed from Moline to Kewaunee, Ill.

Dr. H. M. Austin, of Hindsboro, has removed to Lausing, Kan.

Dr. Frederick J. Dudley has removed from Cerro Gordo to Decatur, Ill.

Dr. Joseph A. Pinckard, formerly of Atwood, has returned, taking Dr. Andrews place.

Dr. C. F. Read of Geneva has taken a civil service appointment in the Illinois Eastern Hospital for the Insane at Kankakee.

Dr. David F. Hansen, of Tuscola, graduate of Northwestern University Medical College, 1908, will locate at Aralla, Tex.

## NEW INCORPORATIONS.

The Secretary of State at Springfield has licensed the following:

St. Francis Hospital Charity Association, Chicago; medical care and surgical treatment; John J. Weber, R. W. McClintock, Edward Byrnes.

Dr. R. Wehnn's Medicinal Kaolin Mine, Chicago; capital, \$250,000; mining and selling kaoline and similar mineral products; incorporators, Robert Wehnn, C. G. Godfrey, O. H. Alexander.

Illinois Orthopedic Sanitarium, Chicago; capital, \$300; conduct sanitarium, publish books, magazines, etc.; incorporators, Joseph H. Greer, M.D., Edwin B. Beckwith, M.D., L. M. Ulmer.

## MARRIAGES.

HARRY E. MOCK, M.D., to Miss Golda Taylor, both of Chicago, Dec. 25, 1908.

JOHN D. SCOLLER, Jr., M.D., to Miss Edith Husted, both of Pontiac, Ill., Dec. 23, 1908.

WALLACE BOYD RUSSELL, M.D., Chicago, Ill., to Miss Elizabeth Hutchinson, Dyer, Tenn., Dec. 24, 1908.

## DEATHS.

MARION F. WILLIAMSON, M.D., died in Joliet, Wednesday, January 7, aged 76 years.

GEORGE GREEN, M.D., of Aurora, Ill., died in Waltham, Mass., Saturday, January 9, aged 74 years.

SAMUEL HOOD, M.D., London, died at his home in Crete, Ill., Feb. 28, 1908, from senile debility, aged 92.

WILLIAM H. SHAW, M.D. (license, Ill.) died at his home in Roscoe, Ill., Dec. 13, 1908, from dropsy, aged 83.

JAMES G. WHEELER, M.D., Cincinnati College of Medicine and Surgery, 1881, of Broughton, Ill.; died in the Evansville (Ind.) Sanitarium, December 18, from cancer of the stomach, aged 61.

WILLIAM FREDERICK DOCKER, M.D., Jefferson Medical College, Philadelphia, 1868, of Shawneetown, Ill., died suddenly at the home of his sister in Minonk, Ill., March 25, from cerebral hemorrhage, aged 62.

JOEL WHITNEY BONNEY, M.D., Missouri Medical College, St. Louis, 1858; formerly of Quincy, Ill., and a member of the State Legislature, but for eight years a resident of Pacific Grove, Cal.; died at the home of his daughter in East San Jose, Cal., Dec. 9, 1908, from pneumonia, aged 82.

MARION F. WILLIAMSON, M.D., Medical College of Ohio, Cincinnati, O., 1865; a member of the American Medical Association and one of the most prominent citizens of Joliet, Ill., died at his home January 6 from pneumonia, aged 75. At his funeral the pallbearers were all members of the Will County Medical Society.

JOHN PITT MATTHEWS, M.D., of Carlinville, Ill., died Jan. 7, 1909, of valvular heart disease, aged 73 years. He graduated at Long Island College Hospital in 1865. He was a charter member of the Macoupin County Medical Society and was always interested in society work; he was president of the Illinois State Medical Society in 1891 and presided over the Springfield meeting of that year; he served as assistant surgeon of the Twenty-second Illinois Volunteer Regiment during the years 1863 and '64; he attended the International Medical Congress at Berlin in 1890; he had been in active practice in Carlinville since the war and had always maintained a high reputation as a successful physician. The Macoupin County Medical Society attended his funeral services in a body and will undoubtedly take proper action at its next regular meeting.



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## ORIGINAL ARTICLES

### PHAGOCYTIC IMMUNITY AND THE THERAPEUTIC INJECTION OF DEAD BACTERIA IN ENDOCARDITIS. PRELIMINARY REPORT.\*

E. C. ROSENOW, M.D.  
CHICAGO.

#### INTRODUCTION.

Our knowledge of the factors which determine the localization of micro-organisms on the endocardium in endocarditis, their maintenance and the means of defense on the part of the host, is still obscure. It is not difficult to understand how the endocardium becomes involved during lobar pneumonia with its pneumococcemia, or in septicopyemic conditions due to the streptococcus or staphylococcus. In fact, in these cases this is what we would occasionally expect. The cases of endocarditis, on the other hand, that develop insiduously from no demonstrable source of infection or from an infection which is slight and which runs a more chronic and milder course are more difficult to understand.

In fourteen cases of pneumococcus endocarditis of the latter type the pneumococci isolated from the blood before and after death were readily taken up *in vitro* by leucocytes in the patient's and in normal blood. They possessed no virulence, or very slight, to animals. This observation was made also in the case of staphylococcus endocarditis.

The pneumococci isolated from the blood in lobar pneumonia, on the other hand, uniformly resist phagocytosis and possess a correspondingly high grade of virulence to animals.<sup>1</sup>

How do the micro-organisms in endocarditis of this mild type protect themselves in the blood and endocardium and ultimately cause death when they seem to be without virulence, while those in pneumonia with

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\* From the Dane Billings Fellowship in Medicine, Rush Medical College and the Memorial Institute for Infectious Diseases, Chicago.

\* Read before the Chicago Medical Society, Dec. 23, 1908.

1. Human Pneumococcal Opsonins and the Antipsonic Substance in Virulent Pneumococci, Jour. Infect. Dis., 1907, p. 285.

their high grade of virulence are usually destroyed and recovery is the rule? The object of this study was primarily to explain, if possible, the mechanism involved in these and other allied questions and to determine the effect of the therapeutic injection of dead bacteria in endocarditis. A full report of the experiments will appear later.

#### CONSIDERATION OF CASES.

Clinically the cases are all characterized by a subacute course and, while they must be regarded as cases of malignant endocarditis in that the patients all succumbed to the infection, they should properly be classed under the group designated in Osler's recent communication as chronic septic endocarditis. All but three occurred in patients between 15 and 29 years of age. The occupation of all was chiefly indoors. Six of each sex were affected. In nine cases the original source of infection could not be determined; in one it seemed to be an attack of tonsillitis; in another the most probable source was pyorrhea alveolaris, while in still another it was an abscess of the alveolus and tooth. The exact duration of the process could not be determined accurately, but probably ranged from four to twelve months or more in the different cases. The blood cultures were the means of making an early positive diagnosis in almost all of the cases. The making of a correct diagnosis on the clinical grounds in most of the cases was difficult, because of the insidious onset, the chronicity and, most of all, because the acute process was engrafted on an old valvular lesion in seven cases. In three cases this point could not be definitely settled, while in four no definite heart lesion was present. Of the four last mentioned there was a definite source of infection in two, while in the other two there was none. Petechial hemorrhages in the skin, one of the much sought for signs in endocarditis, occurred late in nearly every one of the cases long after the blood showed pneumococci. Probably the most constant feature was the development of an anemia of a secondary type. This was most pronounced in the cases which ran a more chronic course. A persistent leucocytosis was present in only four of the cases; the rest showed little or only temporary increase in the number of leucocytes. The leucocytosis was excessively high in the case of peculiar staphylococcus endocarditis, going to 120,000 just before death. Definite chills occurred only rarely and in no case in which chills seemed to mark the onset of the disease. Early the fever was remittent in type. In some patients the temperature was normal for weeks, and then showed an afternoon rise for a short period. Later as embolism and petechial hemorrhage occurred the fever took on a septic or intermittent type and was associated with sweats.

Autopsies were obtained in six of the cases. Anatomically the valvular lesions were all characterized by huge vegetative growths on the valves involved. Usually the surfaces of the vegetations were studded with recent small necrotic areas and ulcers. The infarcts found showed no suppuration.

## BLOOD CULTURES.

It is an accepted fact that fluid media are more efficacious than solid media in routine blood cultures. All observers have obtained a higher percentage of positive results by this means in pneumonia, typhoid fever and septic processes generally. In endocarditis of the type under consideration, on the other hand, solid agar media have given positive results repeatedly where the cultures in broth and milk remained sterile. For this and for the reason that the latter method is a means of obtaining a knowledge of the number of bacteria circulating in the blood the importance of making inoculations in both liquid and solid media in all cases in which endocarditis is suspected may be emphasized. Repeated cultures in a number of cases showed that, while the bacteria is constant, the number of bacteria is never very great. The number of colonies varied between 4 and 2,000 per c.c. of blood. The organisms isolated from the blood before and after death are undoubtedly pneumococci in all but one case, which yielded a staphylococcus with certain peculiarities. The pneumococci isolated are quite different from those isolated from the blood in pneumonia. As above stated, they are freely susceptible to phagocytosis when isolated and possess practically no virulence to animals. They grow tightly to the surface of blood agar and in clumps of broth and in the fibrin clot of the blood culture in broth. The properties were more pronounced in some strains than others, and in one case became more pronounced as time went on. These properties are lost sooner or later on artificial cultivation and on animal inoculations, the organisms then taking on the characteristics of typical pneumococci.

## ANIMAL EXPERIMENTS.

The characteristics just mentioned are believed to be environmental modifications and to bear a close relation to the ability of the organism to produce endocarditis. By inoculations into animals of huge doses of the organisms before the special characteristics were lost, endocarditis resulted without injury of the valves in the case of all the strains tested (six), endocarditis being produced in sixteen rabbits without injury to the valves. Pericarditis developed in every instance in which the endocardium was involved. This was quite independent of the place of inoculation. The special affinity these organisms had for the endocardium, pericardium and the intima of the blood vessels is striking. Intraperitoneal, and usually subcutaneous injections as well, cause no lesions in these regions, but produce a pericarditis and endocarditis instead, especially when a simultaneous dose is injected intravenously. In order to produce endocarditis it was necessary to inject huge doses and preferably into different regions of the body. The animals recovered promptly from the immediate effects of the injection. Blood and peritoneal cultures at the end of two or three days were sterile. Later, two or three weeks after the valvular lesions became pronounced, a loss of weight, fever and dyspnea occurred and in some instances a definite heart murmur developed.

After the special characteristics were lost it was no longer possible to produce endocarditis. The experimental production of endocarditis in the past has been considered quite impossible without trauma to the valves. The earlier attempts in this study were probably failures because the organisms were inoculated too long after isolation and injected in too small doses.

#### THE OPSONIC INDEX AND THE THERAPEUTIC INJECTION OF DEAD BACTERIA.

Early the opsonic index is usually normal or a little above, depending on the presence or absence of extension or accidents, such as thrombosis and embolism. Toward the end it falls far below normal. Four cases showed a rise just before death. The injection of the homologous dead organisms early in these cases was followed in 24 and 48 hours by a rise in the opsonic index and in the leucocytes; usually there was also a corresponding rise in temperature. Clinically no change for the better or worse could be noticed so long as the index was up and the general condition of the patient good. Later, however, after the patient's condition was poor and the opsonic index far below normal, the rise in leucocytes and opsonic index was associated with a drop in the temperature and a definite improvement in the general condition. The rise in the opsonic index and leucocytes following the injection of dead bacteria is apparently not associated with the reduction of bacteria circulating in the blood.

A painstaking study of the method by which the bacteria in these cases seemed to protect themselves against the antibodies of the host may be briefly summarized:

1. By cultivation in the serum and blood of the patient these organisms acquired a resistance to opsonification and phagocytosis instead of an increased susceptibility.
2. They usually grew more rapidly in the patient's serum than in normal serum.
3. While leucocytic normal blood had a marked bacteriolytic effect due to phagocytosis and intraleucocytic destruction, the patient's blood containing the same number of leucocytes, the serum having a high opsonic index, often had no bacteriolytic action. This seemed not wholly due to the lack of phagocytosis, but to the inability of the leucocytes to destroy the bacteria after they had taken them up.

#### CONCLUSIONS.

1. The blood culture in endocarditis is the best means of making an early diagnosis. It should always be made for the identification and study of the infecting organism as well as for prognostic reasons. Barring accidents, the greater the virulence the more grave the prognosis.
2. The therapeutic injection of dead bacteria in endocarditis has very little influence on the course of the disease until late in the course, when there is a temporary improvement following the injections.



3. A very close relation exists between the biologic character of these organisms and their ability to produce endocarditis in the class of cases observed.

4. The organisms isolated, while of practically no virulence to animals and susceptible to phagocytosis on cultivation, appear to immunize themselves against the antibodies produced by the host, and thus to overcome the resistance of the latter.

I wish to express my gratitude, especially to Dr. Billings, in whose service all but three of the cases occurred; to Drs. Sippy, Herrick and C. T. Clark, for one case each, and to Dr. Hektoen, for aid in the work.

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## HYPERCHLORHYDRIA AND ITS TREATMENT, BASED ON ANIMAL EXPERIMENTS.\*

M. MILTON PORTIS, M.D.

Professor of Medicine, Postgraduate Medical School.

CHICAGO.

A great deal of ambiguity still exists concerning the proper diet and treatment of hyperchlorhydria. It is generally believed that an albuminous diet, especially meat, is to be preferred. Schloss, in a recent paper, proved experimentally that a vegetable diet was less irritating and caused less secretion than an equivalent amount of meat. A number of years ago Jurgensen, v. Jaksch and Sohlern, all able clinicians, empirically advised against meat and urged that vegetables be the principal food in cases with hyperchlorhydria. The following work was undertaken at the University of Chicago, in the Department of Experimental Physiology, to determine the HCl reaction of the stomach with various articles of food and further to study the influence of drugs on this secretion.

Two dogs were skilfully prepared for me by Dr. H. M. Richter, according to the method of Pawlow. By this operation the stomach is divided into two stomachs, the larger portion being continuous with the esophagus and duodenum, while the smaller one is converted into a blind pouch with a fistula leading to the abdominal surface. The two stomachs are continuous only by the peritoneum and muscularis, and are separated by the mucosa which forms the floor of the upper segment and the roof of the small pouch. Inasmuch as the vessels and nerves run in the muscularis and serosa, both stomachs have the same nerve and blood supply and both react in all details the same. When food is introduced into the larger stomach, the smaller one secretes, parallel with the larger one, a gastric juice which is uncontaminated by food and which can be collected in pure form through the abdominal fistula.

The dog was starved for 15 hours before each experiment, and the small stomach thoroughly washed with normal salt solution before the feeding. Usually the dog ate eagerly of the various types of food, and

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\* Read before the Annual Session of the Illinois State Medical Society, May 19, 20 and 21, 1908.

later when the drugs were used they were smuggled in with the food. The various vegetables were all boiled in normal salt solution and crushed and strained through a coarse sieve. In each case, whether vegetables, milk or meat were used, the experiment was repeated several times, and the following represent the average of the several experiments:

*Potatoes*.—Amount given, 250 c.c.; total time of secretion, 1 hr. 35 min.; total amount of secretion, 12.2 c.c.; free HCl, 88; total acidity, 104.

*Spinach*.—Amount given, 250 c.c.; total time of secretion, 1 hr. 40 min.; total amount of secretion, 15.4 c.c.; free HCl, 95; total acidity, 120.

*Carrots*.—Amount given, 250 c.c.; total time of secretion, 1 hr. 25 min.; total amount of secretion, 14.1 c.c.; free HCl, 93; total acidity, 115.

*Milk*.—Amount given, 250 c.c.; total time of secretion, 2 hrs. 10 min.; total amount of secretion, 15.7 c.c.; free HCl, 118; total acidity, 147.

*Meat*.—(a) Lean meat put through a meat chopper. Amount given, 1 pound; total time of secretion, 4 hrs. 15 min.; total amount of secretion, 32 c.c.; free HCl, 101; total acidity, 138. (b) Lean meat fed in large pieces: Amount given, 1 pound; total time of secretion, 7 hrs. 20 min.; total amount of secretion, 63.2 c.c.; free HCl, 110; total acidity, 146.

In the experiment with drugs one pound of meat was used and it was fed in large pieces.

*Hyoscin Hydrobromate*.—Amount given, 1/50 gr. by mouth; total time of secretion, 6 hrs. 45 min.; total amount of secretion, 52 c.c.; free HCl, 120; total acidity, 152.

*Morphin Sulphate*.—Amount given, 1/2 gr. by mouth; total time of secretion, 7 hrs. 10 min.; total amount of secretion, 56.3 c.c.; free HCl, 116; total acidity, 154.

*Atropin Sulphate*.—Amount given, 1/50 gr.; total time of secretion, 4 hrs. 20 min.; total amount of secretion, 25.8 c.c.; free HCl, 118; total acidity, 151.

*Strontium Bromid*.—Amount given, 15 gr. by mouth; total time of secretion, 4 hrs. 40 min.; total amount of secretion, 27 c.c.; free HCl, 98; total acidity, 136.

*Strontium Bromid*.—Amount given, 30 gr. by mouth; total time of secretion, 3 hrs. 30 min.; total amount of secretion, 17.1 c.c.; free HCl, 102; total acidity, 145.

These experiments confirm the observation of Pawlow and his students, that the per cent. secretion of HCl is constant and does not vary with changes in diet, nor is it influenced by drugs. That this is also true for the human stomach has been shown by Bickel. He studied a normal stomach in an adult girl, who, because of a benign stricture of the esophagus, had a gastric fistula, and, in imitation of Pawlow's work, had the esophagus cut across, the upper end brought out to the skin surface and the lower end closed. When the girl was fed, the food, after being masticated, passed through the upper segment of the esophagus and then dropped out. As Pawlow observed in dogs, so likewise in this case, the sham feeding induced a constant and marked flow of the gastric juice, which was collected in pure form through the fistula.

He found that, under all circumstances, the per cent. HCl secreted was quite constant, and that it was two to three times greater than we had believed, measuring 0.4 to 0.55 per cent. He found, however, that variations in the quantity secreted easily occurred. Bickel's work has been confirmed by several observers. No case of so-called hyperchlorhydria has been observed where the extreme per cent. of normal HCl has been exceeded.

The variation in the per cent. of HCl that we have noted after a meal depends on the quantity of HCl secreted, the combining power of the food ingested and on the motor power of the stomach. In addition, one must consider the neutralizing power of the mucus and the dilution by the transudate. But the important chemical fact prevails that in hyperchlorhydria we are dealing with a quantitative variation in the secretion—not in a qualitative one. The necessity for acid is supplied by variations in the quantity of juice and not by qualitative changes in its acidity. Our effort, then, in the treatment of this condition should be directed, not merely to binding and neutralizing the excess of the acid, but our therapy should be directed to a reduction of the amount of secretion called forth.

The choice of food that causes least secretion is clearly the vegetables. It excites a smaller amount of secretion per hour, and the total time of secretion is less than one-half that induced by meat. Inasmuch as the same food in a finely divided form reduces the secretion time more than one-half, all foods should be crushed or finely ground or put through a sieve. The vegetable puree is an ideal article of diet. These vegetable soups should be made with water or milk and not with meat, for meat extracts are powerful excitants of the gastric juice.

In addition to vegetables, milk, cream, egg albumin and toast, with butter freely, may be used early, and later stewed fruit, finely mashed, and eggs may be included. Only when the hyperchlorhydria is under control should meat be allowed and then for months the meat should be given cut up fine.

Alkalies are useful in neutralizing the excess of acid secreted, but they can also check secretion if used as Rosenblatt has suggested, one-half hour before meals. He has shown that they act indirectly and exert their influence by reflex action in the bowel. They should be used in amounts large enough to pass as alkalies into the duodenum. Sodium bicarbonate is the best to use and it is well to combine it with sodium sulphate, for it, too, decreases secretion. For neutralizing purposes, if necessary, burned magnesia powder may be given one-half to one hour after meals.

Oils and fats act in a similar manner to the alkalies, decreasing secretion. Cowie and Munson demonstrated that the best results were obtained and the secretion most reduced when olive oil is given before meals, for it acts reflexly in the bowel. It should be given twenty minutes before meals. Cottonseed oil, butter fat and cream all act similarly and are useful.

In these experiments many drugs were tried and only two were found to be effective. Hyoscin and opium have very little, if any, effect, contrary to the statements in the text-books, and should not be used. Belladonna reduces the secretion markedly, especially if given before meals, and can, as the powdered extract, be combined with the alkaline powder. All of the bromids check secretion, but the strontium salt is the most active and it is best given before meals.

For beverages the patient may be allowed water, milk, weak tea and cocoa. Alcoholics of all sorts, carbonated drinks and coffee are harmful.

Finally it is hardly necessary to emphasize that any underlying condition of which the hyperchlorhydria is but a symptom should be properly treated. Neurasthenia, constipation, arteriosclerosis, anemia and motor insufficiency of the stomach must all be looked for in addition to the other common causes of hyperchlorhydria, and be relieved if the best and permanent results are to be obtained.

I desire to express my thanks to Prof. S. A. Matthews, of the University of Chicago, for his helpful advice and many courtesies extended during these experiments.

100 State Street.

#### DISCUSSION.

Dr. Joseph L. Miller, Chicago.—It seems to me, a paper which represents so much work on the part of its author should not go by without some discussion. The only point I wish to speak of is with reference to the method which he has employed of directly attacking therapeutic problems and of putting therapeutics on a rational basis. Work of this sort is valuable, where we have by direct experimentation determined accurately the effect of drugs, or diet, upon the secretions. It is work of this sort which will make therapeutics as scientific as the diagnosis or pathology of disease.

Dr. J. F. Hultgen, of Chicago: I am very glad to hear a report of the experiments performed by Dr. Portis. The demonstration he has given us is very interesting. It is the best thing I have seen in this country. It marks a milestone in our experimental physiology, and we should be proud of the fact that there is some one in America who has sufficient energy and enthusiasm to do this work. But while we are enthusiastic, we must not forget that this work is not done under normal conditions. No one can really say that this dog was quite normal or moving around under normal conditions; he has not had any exercise. In short, he is not leading a dog's life.

The Doctor has certainly obtained very good and substantial results. However, he reasons this way (if I understand him rightly): he has produced secretion in the dog, not hypersecretion. He has no hyperacidity. When a dog has a large piece of meat in his stomach for seven or eight hours, and secretes gastric juice so long, it is an abnormal action only in point of time.

This kind of work was started by Pawlow and his school. They took the question of digestion out of the hands of the Germans, who had treated it as a chemical process, and showed us that it was a psychic one but with a physical basis. But recently Bayliss and Starling have come forward, and by means of ingenious experiments have shown us that certain chemical substances *pro fermentis* are produced, which are independent of the nervous system.

Dr. Frank Billings, of Chicago: I wish to express my appreciation of the work of Dr. Portis. This is the sort of work we ought to see done everywhere. It is work that is going to settle questions in therapeutics that are now considered empirical. For many, many years we talked about cholagogues, and some of us talk about them still—medicines that increase the flow of bile, yet not more than eight years ago it was proved by experimentation not only upon animals, but, as it happened in a case which occurred in a human being, that there was no drug which increased the bile flow, that is, the total amount in twenty-four hours. Bile itself given will increase the total amount of bile, but nothing else will. Such work as this furnishes us with accurate data concerning the effects of drugs. While the results of experiments upon dogs may not be the same as those obtained by experimenting upon man, yet it is this sort of work which makes our observations and the results of our work more accurate.



Those of you who have not read Pawlow's book on the "Work of the Digestive Glands" should get it and read it. So far as its interest goes, Dr. Portis has given us a repetition of his work and findings.

Dr. Arthur R. Elliott, of Chicago:—Before Dr. Portis closes the discussion I would like to add my compliments to those which have been paid him on his work. However, in making application of the results secured by the experimental method, such as he has graphically described here, to the human, there is one great gap which exists, and that is the element of personal equation—the psychic element. In dealing with hyperchlorhydria in the human we have to do with a neurosis, or perhaps there may be argument on the question as to whether or not hyperchlorhydria is a neurosis of the stomach. There will be no question as to the psychic element at work, for all neurotics are at times hyperchlorhydriac. The business man under the strain of great business responsibility has been preparing perhaps for an examination; the woman, who has undergone grief and deprivation is very apt to be a hyperchlorhydriac, and neurasthenics generally and victims of nervous diseases are hyperchlorhydriacs. Here the application of proper dietetic measures, the employment of drugs to restrain excessive secretion, are, of course, necessary, but in addition there is a psychic element which has to be catered to, and until it is catered to we often fail to cure. So a sea voyage, a change of environment, we find to be very important, and *nux vomica* should be given in these cases which is well known to be exceedingly favorable for them, as well as other tonics on account of their effects upon the nerves and the part they play in improving the general condition. So we have to pay attention not only to the stomach chemistry but also to the condition of general strength of the patient, and particularly the condition of the nerve tone.

Dr. Winfield S. Hall, of Chicago:—The side of this most admirable paper and demonstration that appeals most to me is naturally the physiological, and I was especially interested in seeing Dr. Portis demonstrate again one of the great fundamental laws of physiology—one of the laws governing the physiology of the digestive system. I refer to the *law of adaptation*. What is the particular evidence of that law in these experiments? When he gave vegetable food, Dr. Portis found that he got a minimum secretion of gastric juice. When he gave protein meat he got a maximum secretion. As we look at the normal action of the stomach, we find that vegetables call into action the peptogenic activity of the stomach to a moderate degree only because, except in the case of the legums, they have a small proportion of protein. The vegetables of the class with which Dr. Portis experimented (potato and carrot) have a very small percentage of proteins. The action of the stomach would be required in a small degree only. When you give meat to a dog the stomach is the place where this meat is largely digested. So in response to this fundamental biological law of adaptation, the stomach enters at once into its activity to its maximum degree, and if this meat is not finely divided, but bolted *en masse*, as is habitual with the dog, it will remain in the stomach a long time and so call out the long continued action of the stomach, thus multiplying over again the total amount of gastric juice that must be secreted before the food is finally digested.

Pawlow found that if fat is ingested it does not call forth the secretion of gastric juice except in a very low degree: it passes on into the duodenum, and there calls forth its maximum action because the duodenum is the only place where fat is digested.

How can we apply our knowledge therapeutically? I would reason like this: Here is a case of hyperchlorhydria. How shall I give this patient the requisite nourishment, and, at the same time, call into action this gastric mucous membrane to the smallest possible degree? I will give it either fats or vegetable foods. In other words, foods that require the least possible action in the stomach, and yet foods that will sustain the patient from the standpoint of nutrition, and then this food, not irritating, not stimulating the stomach, will pass through, calling forth the smallest possible action. I would, by adopting that method, give the stomach an opportunity to rest and to get into a normal condition where a re-

version to the usual mixed diet, with its larger proportion of meat, would not have the effect of calling forth this extra secretion of hydrochloric acid.

Dr. Portis (closing the discussion):—I want to thank the members very heartily for the manner in which they have received my paper and demonstration. As to the objection raised by some of the members that these experiments are on a dog and not on a human being, and questioning whether similar phenomena would occur in the human subject, I will say such an objection can be quickly answered by stating that the same phenomena have been observed in human beings on two occasions in Berlin under similar conditions produced by operation. These are reported by Bickle and Sommerfeld.

One point in the paper which I did not have time to take up was with reference to the various causes of hyperacidity. It is easily understood that if an individual is neurasthenic, the quickest result will not be obtained by feeding him with vegetables, but by proper treatment for the neurasthenia, the rest-cure treatment, etc. If an individual be constipated and the constipation brings out hyperacidity, treat the constipation. If the individual has motor insufficiency, which brings out such clinical phenomena as have been noted, then, of course, one should treat the motor insufficiency, and the diet is radically different. If, on the other hand, the individual is arteriosclerotic and you notice hyperchlorhydria, then put him on a régime for arteriosclerosis.

It was not possible for me in the twenty minutes allotted to do more than skim over the subject of my paper and to touch on the salient points, but in the published article I will give in detail the results of my experiments, and all of you will have an opportunity to read them.

## THROAT DISEASES IN CHILDREN.\*

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DUBUQUE, IOWA.

In considering the field of throat diseases in children, I would first call attention to the appropriateness of the subject in a general meeting of this kind, the need of the most careful attention to what may be termed a many-sided problem of infancy and childhood, and, lastly, that the specialist is not in as good a position to observe the ultimate evil results of throat infection on the growing child as the family physician who follows its development throughout the periods of early life and adolescence. The advances made along nose and throat lines during the past few years has awakened us to an appreciation of the importance of further investigation. To quote one writer,<sup>1</sup> "By far the most frequent disease of childhood is throat infection. In hospital and clinic work this is not apparent because of the transitory nature of the disease, and in these institutions we seldom see but the sequelæ. Not only are infections of the throat the most frequent disease during childhood, but in their results they are among the most serious." In tabulating the data of six years of country practice, the same author finds that "out of a total of 5,625 clinical cases, 396, or 7 per cent., were those of throat infection, occurring principally in children." Morse,<sup>2</sup> in a valuable review of "Diseases of the Nasopharynx in Infancy," finds that, in his experience, "the

\* Read before the Jo Daviess County Medical Society, Warren, Ill., Jan. 7, 1909.

1. Pope, S. I.: Throat Infections of Childhood, California State Jour. of Med., July, 1907.

2. Morse, J. L.: Diseases of the Naso-Pharynx in Infancy, Boston Med. and Surg. Jour., April 18, 1897.

importance of the diseases of the nasopharynx in infancy and the frequency of their occurrence are not appreciated by the general practitioner," and that "they are often either entirely overlooked or insufficiently treated."

Disturbances and interference with digestion, loss of weight, difficult respiration, with consequent deprivation of oxygen, various glandular, ear and infectious processes attacking the body, are logical sequences of many throat infections and to be expected. It is hardly out of place to say that among the frequent causes of death at the different periods, asphyxia, throat infection or any of the acute diseases of the respiratory tract, and particularly broncho-pneumonia, take high rank. With these preliminary ideas in mind, one is better able to appreciate the forceful statements of such pediatricians as Holt, Jacobi, Hutchinson, Koplik, Oppenheim, Rotch, Tuttle, Starr and many others, that a careful inspection of the throat should never be omitted in any acute illness in children, no matter what other symptoms may be presented. Usually it is wise to defer such examination until the last, as the child is so greatly disturbed by the procedure that it generally objects to any attention thereafter.

The requirements for throat work are simple, being chiefly a good light and thorough but rapid inspection of all mucous membranes. On the soft palate one looks for the beginning punctate eruption of scarlet fever, on the pharynx, fauces and tonsils for various processes of infection due to such organisms as the *Bacillus diphtheria*, influenza, staphylococci and streptococci, and on the mucous membrane of the cheeks for the initial eruption of measles. The tongue, gums and teeth must next receive their share of attention. Last and not least the possibility of a pathological change within the nose, together with its etiologic relation as a direct infecting focus for the throat, should be carefully reviewed.

I shall endeavor in this paper to omit all material which does not pertain strictly to children. Likewise the very important subjects of diphtheria and the exanthemata, which are taken up by other speakers, will be scarcely more than mentioned. Although pathological processes attacking the throat in children are in actual numbers comparatively few, the variations in clinical types seem almost endless and prove confusing. The subjects considered are as follows: Rhinitis, adenoids, acute pharyngitis, retropharyngeal abscess, tonsillitis and peritonsillar abscess, or so-called quinsy. To a certain extent they may all be classified as diseases of the digestive system if one were so inclined.

#### ACUTE RHINITIS.

The types of rhinitis of importance are three in number: (a) acute rhinitis (the common cold in the head), (b) diphtheritic rhinitis, (c) purulent rhinitis (mainly a symptom).

(a) *Acute Rhinitis*.—Acute rhinitis, while ordinarily a self-limited disease and receiving little attention in adults, is a serious and sometimes fatal infection in infants and young children. As expressed by Morse, "A comparatively slight swelling of the nasal mucous membrane in infancy completely closes the nose and prevents nasal respiration. This,

of course, necessitates oral breathing which the young infant performs very imperfectly, especially when asleep. In fact, sleep is so broken in many instances that the baby gets little, if any, rest, and on this account loses strength very rapidly. The occlusion of the nares also prevents proper sucking and interferes a great deal with swallowing, even when the food is given with a spoon or dropper. Consequently the infant takes but little food or refuses it entirely. The temperature in these cases is always elevated, usually irregular and often high. Loss of weight and strength is very rapid as the result of the insufficient supply of fresh air, lack of sleep and deprivation of food, and in feeble babies may be so great as to cause death."

The inflammation, as has been said, is due to infection with micro-organisms and is more or less contagious. Occasionally attacks of head colds, snuffles, etc., in institutions appear as epidemics. For this reason babies and, indeed, all children should be kept away from persons suffering with acute nose or throat troubles and not allowed to sleep in the same bed. Complications in children, such as middle-ear disease, bronchitis, etc., are common. When persistent and frequent colds in the head are seen in children, one should always examine the nasopharynx for adenoids. In addition to the symptoms of nasal discharge, imperfect nasal or oral respiration, interference with swallowing, sucking, broken sleep, etc., seen in babies, we have such signs in older children as sneezing, water discharge and stuffiness of the head.

The treatment varies slightly according to the age. In infants the best result is obtained from liquid petrolatum albus dropped into the nose three times daily. Careful feeding and mild stimulation with a few drops of brandy and small doses of strychnin are other adjuncts. In older children hot baths, hot drinks, a nasal ointment and some one of the many excellent rhinitis tablets on the market containing a little atropia would seem indicated. Inhalations of medicated steam containing compound tincture of benzoin or a few drops of oil of eucalyptus are most excellent. They may also be incorporated in liquid petrolatum, a grain to the ounce and dropped in the nose.

(b) *Diphtheritic Rhinitis (So-Called Membranous Rhinitis)*.—The results of bacteriological examination have shown that a not inconsiderable number of cases of rhinitis of a mild type are due to the presence of the diphtheria bacillus. Failure to remember this fact has sometimes resulted in epidemics of diphtheria in schools and hospitals. Nasal diphtheria is responsible for many unexplainable outbreaks both in institutions and outlying small towns. A culture is really the only means of arriving at a correct conclusion.<sup>3</sup> The symptoms of the disease are, as a rule, mild with little glandular involvement and often absence of constitutional disturbances. The nasal discharge itself is in no ways characteristic, though more often thin. Membrane, contrary to the general idea, is, as a rule, not seen in the nose. Treatment includes the use of such measures as cleanliness and powders, together with the injection

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3. Langworthy, H. G.: Laryngeal Diphtheria, Iowa Med. Jour., May 15, 1908.



of small doses of antitoxin. Systematic cultures should be taken until the nose is shown to be free from bacilli.

(c) *Purulent Rhinitis*.—Nasal suppuration in children is more often a symptom of some other disease, such as foreign body in the nose, adenoids, infection of the nasal mucosa by gonococci from a vaginal secretion, syphilitic disease of the bony walls, sinuses, etc. These sources must be eliminated before a diagnosis of primary purulent rhinitis can be made.

#### ADENOIDS.

Adenoid vegetations in the vault of the pharynx are probably the most common of all conditions met with in infancy and childhood. As expressed by Holt, "It is the source of more discomfort and the origin of more minor ailments than almost any other pathological condition." The so-called adenoid masses are, in reality, nothing more than hypertrophied lymphoid tissues identical in structure with the faucial tonsils. In other words, the adenoid is a third tonsil in the nasopharynx and subject to the same influence as the other tonsils and forms merely a part of the lymphatic ring at the entrance of the throat. While normally some adenoid tissue exists in every child's throat, with a tendency to atrophy toward puberty, when it becomes enlarged by repeated infections and becomes a cause of either local or remote symptoms, there is hardly any question but that it should be removed in most of the cases.<sup>4</sup> The younger the child the more necessity there is for immediate removal. In infants especially, the evil results are most apparent. The operation itself is simple and almost devoid of danger. As an axiom it may be stated that when persistent or frequent colds in the head (the snuffles of infancy), earache or discharge, conjunctivitis, snoring and restlessness at night are seen in infants or children, the nasopharynx should be examined for adenoids. In carefully analyzing a series of adenoid and tonsil cases relieved by operation, the following symptoms in the frequency of their occurrence were encountered: deafness, mouth-breathing, rhinitis, snoring and restlessness at night, conjunctivitis, earache and ear discharge, backwardness at school, irritating cough, thick voice, frequent sore throats, poor appetite, headache, intestinal disturbances, bronchitis, pleurisy, retropharyngeal abscess and rheumatism. In infants snuffles, convulsions, sweating, slighter impediments in breathing, croupy cough and catarrhal laryngitis were the most prominent signs. Few of the babies had the classical "adenoid facies" so often described, and not all were mouth-breathers. The prevalence of conjunctivitis, noted above and not given in most of the treatises on this subject, is important.

The adenoid and lymphatic ring is probably the common atrium of infection not only in tuberculous adenitis, but in other forms of tuberculosis of the head involving the temporal bone, spine and meninges. To conclude, the subject of adenoids in infancy is of as great importance as dental caries in later childhood and should receive special attention.

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\* Langworthy, H. G.: Adenoid and Tonsils, from the Standpoint of the General Practitioner, with Special Reference to an Examination of the Throat in Chronic Systemic Infections. Boston Med. and Surg. Jour., Jan. 30, 1908.

*Acute Inflammation of the Adenoid.*—Acute inflammation of the pharyngeal tonsil is common in children and due to infection. We have not always recognized its frequency, owing to the fact that the masses are hidden behind the nose and above the soft palate. During the acute stage the adenoid is reddened and swollen like the other tonsils, throwing out of its crypts inflammatory exudate and giving rise to fever and constitutional disturbances. The diagnosis is made by direct inspection if possible, temperature, prostration, slight nasal discharge with moderate obstruction, slight redness of the lateral or upper pharynx and negative physical signs elsewhere. Frequent earaches are practically always due to acute adenoid congestion about the orifices of the Eustachian tubes. Some authors are inclined to believe that many of the so-called attacks of febriculæ (ephemeral fever) described by older writers are throat infection of this character complicated with a mild septicæmia.

#### ACUTE PHARYNGITIS.

Acute pharyngitis in children is due to infection. That there are certain predisposing causes, such as exposure to cold, draughts, etc., which reduce the vitality of the mucous membrane sufficiently to produce a local condition of shock, would seem a reasonable explanation. Pharyngeal inflammation, while usually associated with acute tonsillitis, may exist alone or follow a similar inflammation of the nose. The symptoms are throat soreness, rise in temperature, headache and general malaise. In simple pharyngitis the throat, as a rule, shows little more than a moderate hyperemia with evidences of toxic infection. Epidemics of this disease occur. I am indebted to Dr. M. J. Moes for an account of an epidemic of this sort in Dubuque during the past two months:

"The onset is with fever and malaise, accompanied by headache and sometimes pains in the limbs. The fever runs as high as 103.5 for two or three days and is usually accompanied by chilly sensations. By the end of the third day the temperature drops to 101 or 100, and in the course of four or five days more disappears. In one or two instances there has been vomiting at the onset. The throat is usually not complained of, but, if examined on the second or third day, it is found to be reddened. A punctate eruption is usually discovered on the pillars of the fauces, soft palate, posterior half of the hard palate, and a little later appears on the posterior pharyngeal wall. By the end of the third day there is some soreness of the throat, the uvula appears edematous, and the submaxillary glands slightly enlarged. The tongue in most of the cases has a rather thick, dirty white fur through which the papillæ can be seen, giving the appearance of the strawberry tongue of scarlet fever. The circumvalate papillæ show marked enlargement. The fur on the tongue often disappears after six or seven days and the organ then appears dusty-red, swollen and dry. The cases seen were in children from six to twelve years of age, except one, a young man of 22, and is epidemic in character. There is no eruption on the general skin surface, groins or axillæ, nor is there any signs of desquamation. The condition

is an interesting one, especially from a diagnostic standpoint, suggesting, as it does, scarlet fever, without a skin eruption."

The above description is an accurate one, and I have no doubt that you have all seen the same phenomena in numerous instances and wondered whether the case was scarlet fever, with perhaps a delayed rash. In this connection I shall take the liberty of repeating the observation of McCollom, probably one of our greatest living experts on contagious diseases in regard to making a diagnosis when really demanded, namely, that "the appearance of a punctate eruption in the axillæ and in the groins, together with the congestion of the tonsils and a punctate eruption in the roof of the mouth, no matter whether there is any eruption anywhere else or not, are positive proofs of scarlet fever." In early and especially in doubtful cases this idea will solve almost any of the problems confronted.

In infants the mucous membrane of the pharynx and fauces in acute pharyngitis, besides being reddened, is apt to be edematous as well. Sucking and swallowing is interfered with and there may be cyanosis from difficult respiration. Cases in young infants being more or less self-limited are necessarily hard to handle. Drugs internally seem useless, and even local applications to the nose and throat are not always of positive benefit. At times the mildness of the attack has resulted in the primary disease being overlooked, and any existing sequelæ from toxic products, therefore, never explained.

*Treatment*.—The following routine treatment as employed in private practice by Dr. I. S. Bigelow where the condition is one of diffuse hyperemia with a little, thin, dirty exudate scattered over the tonsils is excellent: "Calomel in divided doses, acetylphenetidin repeated in one or two grain amounts according to age, wet compresses (cold) to the throat, *ad libitum*, and a mixture tablet containing tincture of aconite, tincture of belladonna, tincture of bryonia and sodium salicylate in oil of wintergreen. The aconite is excellent in reducing temperature without being actually harmful, the belladonna relieves irritation and the salicylate lessens the liability of complications, besides being an antiseptic. If the child is old enough to gargle or spray it is allowed to do so. For a great deal of throat or reflex ear pain a minute dose of morphin (1/200 gr.) is given without hesitation."

#### RETROPHARYNGEAL ABSCESS.

The retropharyngeal abscess of infancy is a suppurative inflammation of the retropharyngeal lymph nodes which form a chain on each side of the median line of the pharynx. These nodes drain the cavities of the nose, nasopharynx, middle ear, etc., and during the first three years of life are extremely liable to infection. If the possibility of this disease is not considered in certain instances, the condition will be overlooked and a diagnosis of croup, bronchitis, rhinitis, etc., made instead. Inspection should never be relied upon. A digital examination is the only sure method of detecting the presence of a retropharyngeal swelling.

*Symptoms.*—The early symptoms are not characteristic, being chiefly those of a rhinitis or perhaps pharyngitis. The baby seems a little feverish, irritable and unwilling to take food, or there may be difficulty in swallowing. Inspection is negative at this stage. A few small glands, however, may be found at the angle of the jaw, proving oftentimes the solution of the problem. Gradually the neck seems to grow stiffer, the head held more rigidly, or perhaps drawn toward the shoulder, and the few glands in the neck on that side slowly enlarge. Some mucus is often noticed in the throat, together with distinct attacks of dyspnea. If the retropharyngeal adenitis be low, laryngeal obstruction is marked and the diagnosis of laryngeal diphtheria sometimes made. Gradually an indefinite fulness on one side of the pharynx can be made out, and palpitation is sufficient to warrant a positive diagnosis. If the abscess is high up in the pharynx, the laryngeal symptoms are not prominent and the cry is nasal. When the swelling has reached a noticeable size, pus is usually formed and is ready to gush out into the mouth. While one should never jump to the diagnosis of laryngeal diphtheria, there are probably a larger number of cases of diphtheritic laryngitis mistaken for simple croup than retropharyngeal abscesses mistaken for diphtheria. I have always held that McCollom's teaching, "where there is marked dyspnea with rigidity of the sterno-cleido-mastoid muscles with supra-clavicular and substernal retraction, excluding a retropharyngeal abscess, peritonsillar abscess and tumor pressing on the larynx, we have to deal with a case of laryngeal diphtheria," as both sound and wise. In other words, treat every case of severe croup as diphtheria unless proven otherwise, and the other thing, in many instances, which must be excluded is an unsuspected retropharyngeal abscess.

*Prognosis.*—The prognosis is good if the disease is recognized fairly early and the abscess evacuated. Spontaneous evacuation should never be awaited, but an immediate and generous incision made through the mouth, with the patient in an upright position. The pharynx should be palpated daily thereafter to press out accumulating pus. A knife is seldom required to open the abscess, the incision being easily made with a blunt scalpel or pointed scissors. The presence of adenoids or associated rhinitis is probably the prolific cause of retropharyngeal adenitis in most all cases.

#### ACUTE TONSILLITIS.

The tonsils being lymphoid in structure absorb many of the poisons adhering to their surfaces or filling the crypts. Poisons of various kinds, bacterial or otherwise, are quite readily taken up by the lymphatics and, reaching the general circulation, produce a toxemia similar to any surgical infection. Acute follicular tonsillitis is the characteristic inflammation in children, involving the whole tonsils and especially the tonsillar crypts. It is not as common a disease in infants as in older children and young adults. While the tonsillar infection is ordinarily considered a local affair, in reality the complications reported are so numerous and so serious that few diseases are worthy the close study and extended observation as the one under discussion. The sequelæ includes such results



as cervical adenitis, acute articular rheumatism, general septicemia, peritonsillar abscess, nephritis, pyelitis, otitis media and mastoiditis, heart changes, gastroenteritis and many other lesions. Patients are left in a weak and depressed condition for long periods of time.

*Treatment.*—The best treatment for the condition is a widely discussed problem. Most authorities agree that constitutional management is in many cases of as much importance as the local treatment. I think one of the best means of obtaining an insight into the methods employed is to quote very roughly the methods used by busy men around us. The following line of treatment is one pursued by Dr. J. R. Guthrie, of Dubuque, in practically all of his cases: "Immediate administration of castor oil or calomel in divided doses, castor oil being preferred; cold packs to the throat, hot mustard footbath and internally a mixture of potassium chlorate  $\mathfrak{ss}$ , muriatic acid m xii, water to  $\mathfrak{ss}$ . Directions: Teaspoonful every hour for at least eight or ten doses." Guthrie does not use gargles or sprays or any drug to reduce temperature and thinks that the fewer drugs used in any disease the better.

G. A. Staples, Dubuque, Iowa:—"In the treatment of tonsillitis, fomentations, cold compresses to the neck, warm washes (boric acid) for the mouth and as gargles—all give relief. The throat should be brushed lightly three or four times a day with glycerite of tannin or borax, solution of chlorid of iron and glycerin (equal parts) or chlorid of zinc. Small doses of potassium chlorate in decoction of cinchona, with perhaps some salicylate, relieve the pain and apparently hasten resolution. Guaiacum in small doses, if given at the outset, will sometimes cut it short. A lozenge containing gr. ii or iii should be sucked every two or three hours. In acute tonsillitis, whether primary or secondary, the liability to the occurrence of acute otitis media must always be kept in mind and much may be done along the lines indicated for its prevention."

NOTE.—The following measures pursued by the writer in acute tonsillitis of young adults seems to meet the requirements in most cases. In addition to the routine requirements of opening the bowels, light diet and confinement to the house, two sprays are employed in a DeVilbiss atomizer No. 16, which has two bottles but no metal corks or washers to get out of order. The first is composed of equal parts of Dobell's solution and hydrogen peroxid especially useful for cleansing when there is exudate. The second solution is a simple one of alcohol and water, the proportion of alcohol being as much as the patient can stand without too great discomfort. A hot mouth wash of the same is also beneficial. Copious spraying is resorted to at frequent intervals and an ice collar tied around the neck. In addition, acetylsalicylic acid gr. v every hour for a number of doses is given and repeated every day if necessary. I do not hesitate to use opium preparations if the patient is unable to obtain rest or sleep. Astringents are avoided as a rule until the inflammation has begun to subside. Gargles, beyond the benefit of the heat which they may contain, do not reach the seat of the trouble, and most spraying machines are practically useless for the purpose for which they are intended. The relief of congestion, swelling, pain, etc., from cold applications is marked.

#### ENLARGED TONSILS, CHRONIC HYPERTROPHY OF THE FAUCIAL TONSILS.

Enlargement of the tonsils in children, most common after 2 years of age, is due to repeated mild attacks of infection. All degrees are encountered from slight hyperplasia to a condition in which the throat is almost completely filled with tonsillar tissue. As adenoids are associated in 85 per cent. of the cases, an examination of the nasopharynx should always be made. Besides symptoms referable directly to the tonsils, we

have the added combinations, due to the presence of adenoids. Enlarged tonsils are a constant menace to the well-being of the child, favoring local and general infections all the way from acute tonsillitis to tuberculosis and endocarditis. When a source of trouble they should be removed. A so-called regrowth, a recurrence, is impossible if the entire organ has been eradicated.

#### PERITONSILLAR ABSCESS.

Peritonsillar or, better, supratonsillar abscess is a unilateral inflammation of the cellular tissue adjacent to the tonsil. It is less common in children than young adults, and on account of the anatomic construction of the tonsil at birth rather rare in infancy. In most instances the suppuration is explained by obstruction to drainage from tonsillar crypts opening into the supratonsillar fossa. This supratonsillar fossa is a small space above and behind the tonsil proper. The symptoms of abscess are familiar and require little repetition. In most cases the recognition by inspection is easy.

*Treatment.*—A consideration of treatment is very important. In the early stages I am in the habit of prescribing a hot gargle of soda hyposulphite, a teaspoonful in a small glass of hot water every hour. Hot poultices to the neck of the affected side, supportive measures, and, indeed, any medication which will make the patient more comfortable and tide him over a few days of suffering are indicated. In my own cases an incision is reserved for a few days until a certain amount of pus has formed. The incision is then made directly into the peritonsillar region at a point which seems, in one's judgment, to offer the best chance of striking the abscess. This point is usually obtained by gently palpating with the finger and not wholly by inspection.

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### THE DIFFERENTIAL DIAGNOSIS BETWEEN BRONCHOPNEUMONIA AND CEREBROSPINAL MENINGITIS AND GASTROENTERITIS IN THEIR EARLY STAGES.

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The differential diagnosis between bronchopneumonia, cerebrospinal meningitis and gastroenteritis is not easy to make in the early stages of these diseases. The three diseases are of an infectious nature, and either of the three may be caused by any of a number of micro-organisms, although pneumonia is a little more definite in this respect. At any rate pneumococcus is present; whether it is always the originator of the trouble can not be positively stated; with cerebrospinal meningitis and gastroenteritis the micro-organism may be one of many. It may be possible to find all three of these diseases during one sickness of a child. If this happens it usually goes from gastroenteritis to pneumonia and

meningitis. This is not common; in fact, few could live long enough to complete the three.

In this paper I am going to consider the three diseases in the early stages. The source and mode of infection in any one of these three diseases may be one of many, but each has its most prevalent route, which is well to hold in mind in trying to arrive at a diagnosis. The prevalent route for pneumonia is through inspiration, with the air contaminated by dust and smoke. I leave the discussion for another time as to whether pneumococcus comes in with air or is a resident of the throat and tubes and awaits its favorable opportunity, the irritation of mucosa by foreign material in the air.

The favorite route for cerebrospinal meningitis is through the blood current direct or by continuity of tissue. In either case there must be a focus of infection. If this is remembered or discovered in getting history, it will throw some light on the case.

In gastroenteritis the favorite route is with food ingested or anything put into the mouth or swallowed. The micro-organisms so taken utilize the food as a culture media, generating a toxic material, which, absorbing, produces the first symptoms, as well as so irritating the mucosa, as to allow it to be invaded by the micro-organism. We have two stages: The first is the result of the absorption of toxic products from spoiling food; the second is the inflammatory stage, the mucosa being invaded.

In order to shorten this paper and render it less cumbersome, I have arranged the symptoms in a tabulated form and refer to them in the following order:

## BRONCHOPNEUMONIA.

## No. 1.

Onset abrupt with chills and rapid rise in pulse and temperature, if primary; if secondary to any antecedent disease, less abrupt. In either case there is cough and tendency to cyanosis.

## No. 2.

Marked depression; no eruptions.

## No. 3.

(a) Ratio of pulse and respiration is 1-3 or 1-2.

(b) Character of respiration, normal: Inspiration, expiration and pause. The pneumonic type is inspiration, pause, expiration, accompanied by a pneumatic grunt indicating pain.

## No. 4.

Fever high and of remittent type. Cough severe and persistent.

## CEREBROSPINAL MENINGITIS.

## No. 1.

Onset sudden with chill and headache.

## No. 2.

Marked prostration with bluish or purple rash; hence name "spotted fever." (This is apt to be a late symptom.)

## No. 3.

(a) Pulse rapid, respiration but little disturbed except in character.

(b) Respirations are sighing, sobbing and irregular, with rhythm in irregularity and later in the disease may take on the Cheyne-Stokes type.

## No. 4.

Temperature usually high and widely fluctuating from 100° to 105°. No cough.

## GASTROENTERITIS.

## No. 1.

Onset sudden, with history of indigestion for a day or two, food not relished or refused.

## No. 2.

Prostration not so marked in beginning unless there is profuse diarrhea at start.

## No. 3.

(a) Pulse and respirations maintain nearly normal ratio, unless diarrhea is so profuse as to drain system of fluid, thereby producing shock with sub-normal temperature, in which case pulse would shoot up out of all proportion to respiration.

(b) Respiration irregular. Either inspiration or expiration cut short by twinge of colicky pain.

## No. 4.

Temperature high, "toxic fever," fluctuating governed by amount of drainage from bowels in early stage of disease. No cough.

## BRONCHOPNEUMONIA.

No. 5.  
Vomiting is uncommon. If at all is due to indigestion from fever. Ordinary vomiting of sour stomach.

No. 6.  
Bowels constipated or rather mild diarrhea, caused by intestinal indigestion from high temperature.

No. 7.  
Rigidity of neck and chest, without rigidity of extremities. Reflexes undisturbed.

No. 8.  
Pain: Pain in chest, shown by rigidity of chest muscles. Expiratory grunt from pain of inspiration.

No. 9.  
Abdomen is hard, but not distended. Rigidity due to abdominal muscles being brought into play, especially if breathing is labored.

No. 10.  
Facial expression: Anxious face, nostrils flaring, mouth open, lips blue.

No. 11.  
Chest: Large and small moist râles heard over one or both sides with scattered patchy areas of consolidation. Chest findings in young children or infants are indefinite because hard to get without child crying or moaning.

No. 12.  
Eyes: Pupils are not affected. Respond to light.

No. 13.  
Microscope: Its findings are of little value except in chronic types where tuberculosis is suspected.

## CEREBROSPINAL MENINGITIS.

No. 5.  
Vomiting is projectile and out of all proportions to the ingestion of food.

No. 6.  
Constipation the rule.

No. 7.  
Rigidity of body in general, especially of muscles of back. Exaggerated reflexes.

No. 8.  
Pain in head. Shown by scowling, drawn brows, restless rolling of head from side to side, clamping or sucking movements, grinding of teeth, irregular movements of eyes.

No. 9.  
Abdomen retracted.

No. 10.  
Great mental irritability, scowling, drawn brows, mouth closed and jaws rather set.

No. 11.  
Chest findings negative.

No. 12.  
Pupils irregular and irresponsive to light. Photophobia, Strabismus, neuro retinitis.

No. 13.  
Its findings after a lumbar puncture renders the diagnosis positive.

## GASTROENTERITIS.

No. 5.  
Vomiting very marked and is usually the initial symptom. Vomiting aggravated by the taking of food or liquid.

No. 6.  
Diarrhea not marked at the beginning. Rapidly developing, becoming a prominent symptom. Movements contain lymphs of undigested proteids, mucus, soapy fat curds and become greenish, thin and foul smelling and frothy from fermentation.

No. 7.  
Great muscular weakness and limpness of body, reflexes diminished owing to lack of tone of muscles.

No. 8.  
Pain in belly shown by exaggerated peristaltic waves, which are perceptible through thin belly wall. Legs drawn up. Crying when abdomen is handled.

No. 9.  
Abdomen distended with gas or may be flat, if gas has moved with bowel movements. If distended there is tympany, if flat abdomen is soft and not retracted.

No. 10.  
Features drawn and pallid, eyes sunken and lusterless and in severe toxic type picture of "coma vigil."

No. 11.  
Chest findings negative.

No. 12.  
In first or toxic stage pupils dilated but respond to light. In later or inflammatory stage pupils return to normal.

No. 13.  
Microscopic findings are of but little value, as the intestinal flora are greatly increased with no evidence to tell which, if any, are guilty.

The above symptoms would all be found as early symptoms in a review of many cases. But likely they would never all be found in any one given case. Symptoms that appear early in one case may come late in the next, and the reverse is often true of late symptoms appearing early in the disease. Nevertheless many of the symptoms mentioned would be found in every case, and on them rests our hope of an early diagnosis. But as the disease progresses we have the following picture in bronchopneumonia: A child taken suddenly ill with chills, high temperature, rapid pulse and cough. Fever and rapid pulse continue



for three or four days, with rapid, labored and painful breathing, cyanosis and marked prostration, temperature remittent but not intermittent, râles heard over one or both lungs, with small areas of dulness. However, there are many cases of bronchopneumonia with no consolidation. The dulness given by an enlarged thymus gland may be mistaken for consolidation. The dulness of a thymus gland is found over the upper part of the sternum and may extend one inch to an inch and a half on either side.

In the latter part of cerebrospinal meningitis, quite another picture is present. In this also the child became suddenly ill, with intense headache, vomiting, chills and fever ranging from  $101^{\circ}$  to  $104^{\circ}$ , pulse rapid, 120 to 150; respirations but little disturbed, except in character, which are sobbing, sighing with rhythmical irregularity, which may merge into Cheyne-Stokes type; convulsions and delirium rapidly follow. There is opisthotonos, with severe pains down the back of the neck and along the spine; also great muscular rigidity. The delirium is of the active type rather than comatose. The child is irritable and there is a champing and rucking motion of the mouth, restless rolling of the head from side to side and irregular movements of the eyes and hands, with a tendency to turn the thumb into the palm. The posture is very characteristic owing to the opisthotonos. The child can not lie on its back, but lies on its side, with head retracted, spine arched and limbs flexed. The leg can not be extended while the thigh is flexed on the abdomen (Kernig's sign), which late authorities do not consider diagnostic in itself, as it is found in other diseases; but, taken with the rest of the picture, it is valuable. After a tentative diagnosis has been made which is sufficiently positive to justify a lumbar puncture, then the diagnosis with the aid of the microscope is cleared of all doubt.

In the later stages of gastroenteritis: By the fifth or sixth day the child has an emaciated look, eyes sunken, half closed and lusterless, giving a history of having taken suddenly sick with high pulse and temperature, vomiting and a rapidly developing diarrhea, which by the fifth or sixth day has become foul smelling, thin and purulent, movements frequent—12 to 20 times in 24 hours. The movements look green with whitish or yellowish curds and particles of tough casein resembling broken pieces of sweet corn. Soapy fats and tufts of mucus or shiny-looking mucus are present. The acid character of the contents of the bowels causes tenesmus, pain and severe straining, which is relieved temporarily by evacuation of the bowels. The buttocks become excoriated, even with the best of care. The microscope shows numerous intestinal bacteria, and if the cereals enter into the food the iodine test will give the blue reaction of free, unchanged starch. The green stool when due to the cromogenic bacillus is decolorized by the addition of a drop of nitric acid. The green turns to pink, purple or violet if due to biliary salts" (Cotton). It should be remembered in either bronchopneumonia or meningitis with the child's lowered resistance to any bacteria, the gastrointestinal tract is apt to be involved, unless (in the words of Cromby)

"one stands guard before the digestive tube," owing to the great possibility of infection from the food.

I believe there are few cases of bronchopneumonia or meningitis, in the families unable to have trained nursing, where the gastrointestinal tract is not involved to a greater or lesser degree. Then the enteritis may be primary and either of the others may be secondary. All three being infectious, any one may open the way for either of the other two by reducing the child's resistance to infection.

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## WHEN SHOULD AN OPERATION BE PERFORMED FOR STRABISMUS, SQUINT OR CROSS-EYES IN CHILDREN AND IN ADULTS?\*

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Before answering the above question we will necessarily need to inquire into the proper study of strabismus, which embraces not only a study of the act of deviation itself, but of the causes leading up to the deviation, the pathological processes involved in it, and the best methods of overcoming it. What is strabismus or cross-eyes? The word is an old Greek one, meaning squinting. Strabismus is an inability to bring the visual axes of both eyes simultaneously on the one point, the axes of vision of one or both eyes always deviating in a certain direction from the object looked at. It is, on the one hand, the result of errors of refraction, equal or unequal in both eyes, an inequality of the meridional planes of the eyes; on the other hand, it may be due to imperfect innervation, weakness or paralysis of one or more of the extrinsic muscles. Strabismus is divided, according to the direction taken by the muscles, into convergent, divergent, upward or downward. Convergent squint represents about 85 per cent., divergent about 10 per cent., upward, now and then a case, while downward squint is very rare.

Sometimes strabismus is of a mixed variety, as when the convergent form is associated with an upward squint. Strabismus may be confined largely to one eye, but both eyes always participate in it, unless it be traumatic, paralytic or consecutive to other disease. A purely monolateral squint does not exist, except under the conditions just named. Strabismus may be continuous or occasional. From the standpoint of dynamics it may be concomitant or functional, on the one hand, or paralytic, on the other. The terms concomitant and functional are synonymous. In his classical treatise on the "Errors of Refraction and Accommodation," published by the Sydenham Society of London, Donders

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\* Read before the Chicago Medical Society, Dec. 16, 1908. For discussion, see p. 341

first brought out the intimate connection of functional convergent strabismus with hyperopia. Donders found that, of all convergent strabismic eyes, 75 per cent. were hyperopic. When one reflects that these facts were suggested before the invention of the ophthalmoscope by Helmholtz, the importance and the classical character of Donders' work may be inferred. It is a well-known fact, amounting almost to an axiom, that refractive error is bilateral and usually approximately equal in each eye, and that, if astigmatism is present or complementary, this is usually in the same meridional plane in each eye of the individual; this occurs in 80 per cent. of the cases of strabismus. We must remember that accommodation is a function of the ciliary muscle, pure and simple; that convergence is an act of the internal rectus and is a complement of and reinforces the act of accommodation. Convergence is an extra-ocular act, accommodation is an intraocular act. We must remember also that astigmatism and anisometropia are purely anatomical failures, either of the cornea or ocular axis or both. If the concomitant character of strabismus is granted, as evolved by the elder Graefe, by whom this name was given in antithesis to non-concomitant or paralytic strabismus, then the first radical step in the conception of strabismus has been taken, viz.: its character is bilateral and not monolateral; both eyes participate in it; it is not alone a lesion of muscle and nerve, but it is a functional loss of equilibrium due to errors of accommodation and refraction primarily, and assisted in some cases by faulty attachments of extrinsic muscles, or by other anatomical or pathological vices of the orbits.

You will note that there have been two periods of the history of the study of strabismus. The first dates from the teachings of Stromeyer and Dieffenbach in 1838, when squint was recognized as a muscular deformity. Squint was intimated by Helmholtz and elaborated by Donders; by them squint was regarded as an optical anomaly and due chiefly to the hyperopia and the normal habit of convergence, in which an action of the ciliary muscle or the ciliary ligaments is established. Increased nerve-impulse is imparted to the extrinsic muscles or the interni.

In the emmetropic, or the normal eye, all attempts of accommodation are accompanied by convergence. In hyperopia the interni show tractile power greater than that of the external recti: in myopia the opposite condition prevails. Hence it follows that hyperopia leads to inherent strength of the interni, while myopia weakens the interni by nervous stimulation. When binocular vision is abandoned, convergent or divergent squint results; that is to say, when the eyes fail to fix together on one point, the eyes are turned either in or out, as the case may be. As typical divergent strabismus is associated with myopia, so typical convergent strabismus is associated with hyperopia. Divergent squint, however, by exception is oftener found with hyperopia than is convergent squint with myopia.

If divergent squint is a passive act and implies use or disuse, then convergent squint is an active act and implies spasticity and contraction of a muscle and is usually associated with the act of accommodation.

Either theory must carry with it its own therapeutics: the first by purely muscular theory of Stromeyer and Dieffenbach, by operation on the muscles; the second, by the accommodative refractive theory of Donders, by a correction of refractive anomalies.

About five years ago Claude Worth, in the *Archives of Ophthalmology*, 1903, on "Squint" made some characteristic observations on the subject of strabismus. He wrote that squint is not a disease but a symptom. He found that 81 per cent. of convergent strabismus have perfect abduction. When a macula has ceased to be the most sensitive part of paracentral region, or with a point of the extreme periphery, this is called false fixation. He further states, if an eye with a faulty macula be made straight by operation, crossed diplopia is produced. Congenital amblyopia is very rare, which he claims can be checked by stimulating the macula, and, as we know, that is done by putting glasses on so that the rays of light may focus on the retina. He adds that hyperopia is one of the causes of squint, of which the principal one is a partial or total absence of the fusion-sense. In this connection, Landolt, of Paris, has written at great length. In spite of his belief in the theory of Donders, that concomitant squint is a bilateral affection, he writes, forty years later, that our knowledge of the anatomy and physiology of the ocular muscles is still insufficient. He states that in convergent strabismus both external recti muscles have grown weaker, while in divergent strabismus both internal recti have grown weaker. Hence follows an argument for strengthening the weakened muscle of the strabismic eye instead of weakening the deviating muscle: that is to say, he would make advancement of the external recti muscles in convergent strabismus, of the internal recti in divergent strabismus.

He recognizes that tenotomy of the deviating muscle is easier, but argues that it is not physiological. The center of rotation of the eyeball is not fixed, as has been asserted, but is movable; it is due to the resultant effect of all the forces which hold the eye in position and which move it. One of the functions of the four recti muscles is to retract the eyeball, while the oblique muscles draw the eye forward. If tenotomy, or dividing the muscles of a deviating muscle, weakens it, then the oblique muscles increase their power and pull the eye forward so that it projects beyond its normal plane. This is one reason why a tenotomized muscle reattaches itself farther back on the eyeball; another reason of greater weight is that found in the rotation of the eyeball, which displaces the axes of fixation further outwards, away from the vertical plane, by the contraction of the unattached antagonistic muscle.

Projection of the eyeball forward is further increased by the fact that the tenotomized muscle contracts more than its antagonist because the muscle, being detached, only the check-ligaments, or Tenon's capsule, which follow the course of the recti muscle, run toward the orbital margin. Landolt argues that the mobility of the eyeball must suffer after tenotomy, and adds that the success of a tenotomy depends on this loss of mobility. An antagonist never gains as much as a tenotomized muscle loses. By a tenotomy the muscle-cone loses its previous proportions.



and the muscles forming this cone embrace it less than before. On the contrary, advancement of the antagonist forces the eyeball deeper into the apparatus, or the zone of motility: on account of this retraction of the eyeball, advocates of advancement are wont to argue the increase of motility of the eye. The argument is a specious one, though based on well-established physiological laws and well-known anatomical facts; but its author possibly forgets that in a tenotomy of the internal rectus for convergent squint, a certain amount of projection being admitted, three long recti muscles remain whose efforts in maintaining the muscular zone are nearly equal to the contracting power of the internus. The ratio of dynamic power of the rectus externus to the rectus internus is 1:5 or 6, that of the superior and inferior recti is 1:7 or 8. In addition, the power of the oblique to propel the eyeball forward is exceedingly slight. It is also well known that the perimetric field of vision of an eye is but little constricted three or six months after a complete tenotomy of the internal rectus. The excursion towards the nasal limits remains at about 45 degrees, or even more. It is, furthermore, an admitted fact that Landolt, accomplished scientist as he is, performs tenotomy of a muscle oftener than an advancement of the antagonist, for no one recognizes better than he how much more difficult of execution is an advancement operation and how many more important features there are to be overcome in it. The nicest quality of execution in measurement, as well as the most perfect instruments, are required. I fear, if those of us who relied upon advancement, pure and simple, for the rule of our procedure in convergent squint, laid the bare facts to view, it would be found that we sought an accessory tenotomy to complete an otherwise unfinished operation.

I have introduced Landolt's arguments because they were ingenious, were based on physiological principles and anatomical facts, have found many followers, and were published in one of the most scientific and conservative archives of our day. In undertaking the intelligent care of a case of strabismus, knowledge of the insertion of each rectus muscle to the eyeball is necessary. The internal rectus is inserted about 6 mm. from the inner corneal margin; it directs the eye strictly inward. This muscle is the shortest, broadest and strongest of the four recti muscles. The external rectus is inserted about 7 mm. from the external corneal margin; it directs the eye strictly outward; it is shorter than the superior rectus, but larger than the inferior. It has two heads of origin at the common ligament of Zinn, and the foramen lacerum posterius. The superior rectus is inserted obliquely  $7\frac{1}{2}$  mm. from the superior corneal margin: it directs the eye strictly upward; it is the longest and the weakest recti muscle. The inferior rectus is inserted obliquely about 7 mm. from the inferior corneal margin: it directs the eye downward and inward; it is shorter than either the superior or external rectus; it is stronger than the superior, but weaker than the external rectus. The internal rectus averages 15 to 25 degrees, the external rectus 5 to 8 degrees, the superior rectus 2 to 3 degrees, the inferior rectus 2 to 3 degrees. The superior oblique directs the cornea of the eye downward

and outward. The inferior oblique directs the cornea upward and outward.

From what has been stated here it will be seen that Donders taught us the intimate relation between convergence and accommodation. We have known that the rational cure of squint is an early correction of the error of refraction; but, owing to the difficulty of accurately correcting errors of refraction in young children, we have usually waited until the child was old enough to assist us by reading the test type. Then it is too late to cure the majority of cases and we are compelled to perform a surgical operation which has yielded fairly satisfactory results from a cosmetic point of view, and in a number of cases the permanent results of the operations are far from idealistic; some cases develop a



Case 1.

divergent strabismus later in life, which is a deformity more deplorable than the original one.

We have learned from the preceding paragraphs that at least 90 per cent. of all children are born hyperopic; we can readily understand that every one is potentially capable of acquiring convergent squint. Therefore, we conclude that there must necessarily be some exciting cause which in a few cases is quite apparent, such, for instance, as paralysis, central chorioiditis, opacities of the cornea or lens, an optic-nerve atrophy, etc.

CASE 1.—At present I have under observation a very intelligent nine-year-old boy, brought to me a few years ago, with a convergent, monocular squint. In the squinting left eye there is a small posterior polar cataract, a corneal opacity, of the eyeball. The left eye protrudes from the orbital cavity considerably more

than the right eye. When the boy was brought to me the father wanted to know whether it would be necessary to have the left eye removed on account of the total blindness and the bulging out of its socket. After careful examination of both eyes, finding normal vision in the right eye and eliciting no complaint from the patient as to pain or discomfort in either eye, I held a consultation with Dr. Martin, who examined this case with me, and we concluded to let well enough alone. A few months ago the boy was brought to the office complaining of severe pain in the left eye, with slight attacks of pain in the right eye. After careful examination of both eyes the child was put under treatment of atropin to be instilled into both eyes three times a day, he was ordered out of school and hot applications were applied whenever he had an attack of the pain. The patient was seen daily for a week, at the end of this period there was present total hyperopia of three diopters. This correction gave 20/20 vision in the right eye and perception of light in the left or blind eye. It was noted that the squint in the left eye under full correction and atropin had almost entirely disappeared. After the atropin had worn off newspaper print could be read with right eye without the aid of glasses;  $\text{lus } 1.50 \text{ D.}$  was ordered to be worn constantly and the pain and inflammation had subsided. A  $1/2$  of 1 per cent. solution of atropin was prescribed, one drop of which has been used once a day for several weeks in the squinting eye, which seems to relieve the pain and congestion and together with the wearing of the glasses partially corrects the squint. The boy is attending school now without any difficulty. I have explained to the parents that the reason the spectacles do not correct the deformity entirely is on account of the cataract and the reason the child can not see with his left eye is because of the opacity of the cornea and the existence of the squint from a very early age, a few months after the child's birth, according to the parents. The parents are also instructed to look out for the danger symptoms of pain and inflammation of the eyes, so that he may avoid if possible the removal of the eye before giving it a thorough course of medical and optical treatment. It is questionable whether even a tenotomy would improve the condition, and the cataract is so small that it would scarcely seem advisable to extract it.

This class of cases is very interesting from a scientific point of view and often baffle our best skill to remedy. It is not the management of such cases that I had in mind in the preparation of this paper. I intended rather to call the attention to a consideration of the ordinary squint, in which both eyes are, except for error of refraction, apparently healthy so far as we can determine objectively and subjectively. In many of such cases we are liable to accept the statements of the parents that the squint followed some slight illness, or that the eye was inflamed or injured at birth or soon afterward and a bandage was applied and when it was removed the eyes were crossed. We are often informed that it may be due to the habit of imitating other children. Sometimes it seems, as Worth teaches, that there is some congenital deficiency of the fusion sense, and that only the suspension of binocular vision temporarily would suffice to destroy it altogether.

These observations are true to a certain extent, but those of us who have observed the development of squint in a large number of young children have noticed that it is not developed quite so suddenly as we are prone to be led to believe, but that it does come on slowly. Many a child is brought to us in doubt whether the child squints or not, and frequently I have to keep the case under observation for a period of weeks before a positive diagnosis can be made. Observers who have had the opportunity of following up a case very closely have no doubt noticed that a child

squints at first occasionally; this may last for weeks, months, or, in some cases, years; then occurs a period of alternating squint lasting a smaller or greater period, which may terminate in a permanent monocular squint, deterioration of vision in the eye that does the squinting.

It is true that there are many cases on record of spontaneous cure of squint, because patients later in life, when being tested for railroad service or pensions, are so often found amblyopic in one eye and they often tell us that they squinted in early life. Among 5,000 pupils that I examined at the State Normal School of Wisconsin extending over a period of five years, from 1891 to 1896, ages ranging from 8 to 30, 150 students were found to have amblyopia in one eye with vision ranging from perception of light to 5/60. The refraction of the amblyopic eyes was not measured.



Case 2.—First photo.



Case 2.—Eyes are straight.

CASE 2.—The patient, who is present at this evening meeting, is a woman, 35 years of age, a seamstress, apparently in good health with the exception of headaches and neuralgia, occasional attacks present since childhood. She presented herself at my office in April, 1907. Examination revealed convergent squint of 45 degrees in left eye, with vision of 2/200. No improvement with glasses. Right eye vision was 20/60, with compound lenses vision equalled 20/40. After performing an advancement operation on the external muscles of the left eye and the fitting of glasses under atropin and prescribing full correction vision in the right eye equalled 20/20, or normal, and the left, or squinting, amblyopic eye, could see 20/80, besides being straight as seen in the second picture. The headache and neuralgic attacks have ceased; there has been noted an improvement in the mental condition in the past year and a half.

CASE 3.—A nervous child, girl, aged two and a half years: vision equalled about 5/200 in both eyes; convergent strabismus or internal squint of both eyes, left eye of a very high degree. Atropin was used for two weeks, and the refraction was measured with the retinoscope, or shadow test, with the following results: right eye plus 4.50 S., vision equal 20/20, left eye plus 7.50 S., vision equal 20/20, both eyes being perfectly straight with glasses on. The tests were made with Worth's ivory balls and an image reflected on each eye separately from the ophthalmo-



scope. This case has been under observation for nearly two years, and the eyes have remained straight with glasses on; they converge slightly without the glasses. The child has improved in general health and has been exceptionally free from attacks of indigestion, from which she suffered before.

The age at which squint first appears has a most important bearing on the treatment, judging from my own personal experience in a number of cases and in comparing the statistics of other observers, especially of Worth, who presents over 1,000 cases of monocular squint; it appears, beginning in each year of life in the following order—75 per cent. develop before the fourth year, in 178 alternating cases, more than 53 per cent. were noted before the second year; thus it will be seen that, if treatment is to begin, as I believe it should, with the first appearance of the squint, we must commence very early in life.



Case 3.—First position. Left eye turns in without the glasses.



Case 3.—Second position, a few months later. Eyes perfectly straight with the glasses on.

#### CONCLUSIONS.

We have learned that strabismus depends upon some of the following causes:

*First.* It is an inability to bring the visual axes of both eyes simultaneously on the one point, the axis of vision of one or both eyes always deviating in a certain direction from the object looked at.

*Second.* It is on the one hand the result of errors of refraction equal or unequal in both eyes, an inequality of the meridional planes of the eyes.

*Third.* Or it may be due to imperfect innervation, weakness or paralysis of one or more of the extrinsic muscles.

*Fourth.* Convergent squint represents about 85 per cent, usually both eyes participate in it.

*Fifth.* It is a functional loss of equilibrium due to errors of accommodation and refraction primarily assisted in some cases by a faulty

attachment of extrinsic muscles, or by other anatomical or pathological vices of the orbits.

*Sixth.* Typical convergent strabismus is associated with hyperopia, typical divergent squint with myopia.

*Seventh.* Ninety per cent. of all children are born hyperopic and are potentially capable of acquiring convergent squint.

*Eighth.* The rational cure of squint is an early correction of the error of refraction as soon as the diagnosis of squint is positive.

*Ninth.* It is not advisable to perform a surgical operation on a young child before the age of 5 to 10 unless all non-surgical methods have failed to improve the squint and greatly increase the visual acuity; for, in a number of cases, the permanent results of operation are far from idealistic, some cases develop the divergent squint later in life, which deformity is greater than the original one.

*Tenth.* Since amblyopia is present in one or both eyes in a chronic case of squint it is advisable (in adults) up to 40 years of age to prescribe full correction under atropin, and after the patient has worn the glasses six months to note the improvement in the squint and in vision and if the results are not satisfactory surgical interference is justified.

Two weeks after the operation is performed the case should again be refracted with and without atropin.

70 State Street.

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## EYE DEFECTS OF BACKWARD CHILDREN.\*

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The increased demands of school life and the rapid advances in educational methods have made the physical well-being of the child a more and more important factor in education. Educational institutions of to-day protect and develop the physical condition of the child side by side with the mind, but the dull and backward pupil who is mentally deficient because of improper functioning of the eyes is more or less neglected. There is no physical defect that interferes with or even prevents the progress of a child in school so much as defective vision and there is no defect so easily and cheaply remedied. Children with defective eyes must be divided into two classes: first, those who are really mentally deficient, and whose defective eyes simply make their condition more pronounced, and, second, those whose minds are normal, but who are dull and backward because of their inability to overcome their eye defects without a great or often impossible expenditure of nerve force. It is for the pupil of this latter class that the greatest efforts on our part should be exerted. They are the children for whom and upon whom especial thought should be bestowed. Within a few years reading

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\* Read before the Chicago Pediatric Society, November 16, 1908.

was taught by a slow and cumbersome method. Few children enjoyed the reading of a book until the third school year, but to-day this is all changed. By the present methods of teaching reading the child reads simple books at home for his own pleasure before the first year is ended. The loss of nervous energy necessitated by reading and writing at the ages of from 5 to 8 years is an unwarranted drain upon the health of the child. Instead of giving the child the free and vigorous movements of the larger muscles at this age, the use of the smaller ones with their finer adjustments for reading and writing are brought into play.

The sacrifices caused by this premature strain in this age of rush and the influence upon the one organ—the eye—which is abused more than any other, can not be overestimated. Few realize how enormously complicated is the act of reading and how many difficulties must be conquered before the printed word becomes the spoken word, never stopping to consider that all this mysterious and difficult adjustment must be made in early childhood. Imagine for a moment the immense difficulty the young child must experience in learning to direct and control the necessary movements of the eyes in the act of reading. The effort made to follow the printed line from side to side, to fixate particular sentences, words or letters hampered by the inherent physiologic incompleteness of childhood. From observation and examination of a very large number of foreign-born children who frequent the eye department of the West Side Hebrew Dispensary, I am convinced that not only are defective eyes very common, but, owing to neglect, lack of proper food, air, care and hygiene, these defects are much more serious on the average than among native-born. Examine these eyes and you will perhaps find corneal opacities or a congenital cataract or, what interests us particularly, some remediable error of refraction. Place this child in a school where his defects are overlooked and what results? An immense amount of physical suffering, expressed or endured without complaint. In childhood and early adolescence, the plastic period of growth, the eyeball is soft and yielding, and the strain of the ciliary muscle and those of the globe are productive of changes in its shape. The hyperopic eye is the most frequently observed in these cases and the one entirely misunderstood by parents and teachers. Unless the hyperopia is of high degree the child can often read the 6/6 or 6/5 line at 6 meters as readily as the child with normal eyes, and for a time can often read the finest type at 12 inches. This eye, when at rest, has its distance image formed back of the retina, and to see clearly must use its power of accommodation oftentimes much in excess of the amount necessary for the normal eye to accommodate at the ordinary reading distance. When the eye is used for close work there is the usual accommodative effort for the near point, added to the amount already in use for distance. This combined effort is much too great. The ciliary muscle can not keep it up and so the accommodation soon relaxes, the type becomes blurred and the book is dropped. A child with such eyes finds it impossible to keep the print clear, no matter how large, and will finally cease to make any effort, with the result that he fails to keep pace with his fellow-pupils. If such

a child is naturally dull, the inability to study makes the dulness very much more marked.

The high degrees of hyperopia are easily detected, as such eyes can not accommodate sufficiently to get clear distant vision, and, in order to get as large a retinal image as possible, holds the school book within a few inches of the eye. These cases are often wrongly diagnosed as myopia and sent to the ophthalmologist as such. Pass from this type to another where the hyperopia is of low grade and the least easily detected. This is the child who has excellent vision, learns readily and is interested in things about him, but neglects his studies, and his failure to do well at school is attributed to deliberate neglect on the part of his overworked teacher. He begins the day at school well enough, is bright, but has a reputation of being lazy, idle and mischievous. He tires soon of his work and is constantly reprimanded. The difficulty with him is that, while his eyes are keen enough for transient distant vision, his eyes tire after a short application for close work and begin to wander. He can not keep up on account of his inability to overcome his eye defect without a great or often impossible expenditure of nerve force. If he is closely watched each afternoon he has headache, pain or more or less general discomfort in the eyes. Such a child can not possibly have the pleasure in learning a normal child should have.

If we consider eyes normal because a child can see the blackboard from the back seat and read the normal line of the test-type, we are overlooking a large number of children whose eyes are causing them great suffering, for the child with a moderate amount of astigmatism may also by an effort of accommodation, or by partly closing the eyelids, be able to pass the school test, as does a child with normal distant and near vision. In astigmatism the curvature of the cornea is not uniform, being greater in one meridian than in another. Eventually the great effort to maintain this vision soon produces general discomfort, he falls behind in his class, there is a disinclination to study, he hates school and becomes a truant. The backward child with myopia demands the greatest care. Doomed often from childhood in failing to have his childish imagination stimulated by the beautiful things in Nature, his work is bounded by a few inches beyond his nose. He can not see to play the games of his schoolmates, and, though put in a seat close to the blackboard, derives slight benefit from it, and what is seen is obtained only with a strain. Later on, when information can be derived from books, there is an added danger from his myopia becoming progressive. He sees to read by holding the print close to his eyes, but loses tremendously by reason of his defect. The eyes are more or less diseased and consequently become more and more myopic until vision is greatly reduced, and the earlier we can correct the refractive anomalies by the aid of proper glasses the more we shall help their eyes and brain.

Even worse off is the child whose sight is impaired by opacities resulting from disease or neglect. With his distant vision as poor as the myope he has added the spotting and distortion of near objects by the constant shadow of his opacity. He earns a reputation for stupidity,



idleness and inattention and is the butt of his better-equipped mates. Less common than refractive errors, but often dependent upon them, is a lack of perfect balance of the extraocular muscles which make possible the movements of the eyes. Activity on the part of these muscles is excessively fatiguing and any cause which would affect their nerve centers would, in turn, affect the eye movements by which reading is made possible. The backward child with whom nerve exhaustion is the usual condition finds it a task beyond his strength to follow with accuracy and speed the mysteries of the printed page and is constantly losing his place and slipping off the line. Every child struggling with one of the foregoing conditions is working at a disadvantage. The demands of school life are so great that even a normal eye fails, and refractive errors develop, and it is no wonder, then, that the imperfect eye must suffer. I personally have seen many apparently dull and backward children transformed into bright, energetic pupils by the benefits derived from improved eye conditions. The number of dull or backward children with imperfect vision is entirely too great to be accounted for on the ground of mere coincidence.

In view of the fact that investigation showed that 60 per cent. of children examined in the Philadelphia schools had eyestrain or defective vision, the city in 1907 established an ophthalmologic division of the bureau of health. The city council appropriated \$300 for glasses for children unable to pay for them, and with this money 354 children were fitted with glasses. These children without glasses could not read from the blackboard and could not see the print in their books; in many instances they were thought backward and often mentally deficient. The correction of these defects by the fitting of proper glasses was followed by remarkable improvement in the work and conduct of the pupils. Children in special schools were enabled to return to the regular schools. Dr. Joseph L. Neff, director of the Department of Public Health and Charities, considers that the report of the first three months' work has demonstrated that many so-called mental defectives and incorrigibles do not really belong in that category. The report emphasizes the fact that the expense incurred is more than counterbalanced by the increased worth of an educated citizen over an illiterate one who may become a public charge, or whose earning capacity is so curtailed that he can contribute but a small amount to the support of the state. Dr. Neff believes that in many cases such children would have joined the criminal classes or in some way have become a burden on the community.

From a study of the subject and my personal experience I would offer the following conclusions:

1. That refractive errors are unusually frequent among backward children.
2. That the correction of these defects by the fitting of proper glasses is followed by remarkable improvement of the mental power and allows the apparently backward child to keep up with his mates.
3. That it would be decidedly good policy to have the eyes of all children with real or apparent mental deficiency thoroughly examined as a matter of routine.

## POSTOPERATIVE NASAL HEMORRHAGE.\*

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CHICAGO.

While an annoying or dangerous hemorrhage rarely follows an intranasal operation, it is a possibility which may at any time occur with even the most cautious operator. In order to anticipate and avoid hemorrhage it is the routine practice of some operators to tampon the nostril for 24 hours after any cutting operation, notwithstanding the acknowledged disadvantages of such practice. My preference has generally been to leave the open wound so drainage and cleansing can be secured by the use of hot carbolyzed nasal douches, repeated several times daily as directed for the first week or so following the operation, in addition to and in connection with such other medication as seems to be indicated.

After removal of polypi and after cauterizations, the danger of hemorrhage is practically *nil*, and in these cases I omit the use of the nasal douche as above mentioned. It is, furthermore, of course, understood that by following the so-called "window resection" operation the use of tampons is invariably employed.

After the cutting operations being considered, there is always for several hours a slight oozing or escape of a thin serous discharge tinged with blood, and of this fact the patient is forewarned. Should this develop into a real hemorrhage, I have for years given the patient verbal advice as to an easy method of packing the nostril, which has generally proven effective. I have also advised the summoning of a near-by physician, should such course seem necessary, as in event of such occurrence immediate assistance is required, and too much time would be lost in waiting for a visit from the operator who, in a large city like Chicago, is generally a considerable distance away. Furthermore, a hemorrhage is most likely to occur during the night, when the difficulty of making a long trip is materially increased, as well as the likelihood of successfully reaching the operator by 'phone or messenger. Additionally any physician called will generally without trouble succeed in rendering the required service.

There may, though, occur at any time a hemorrhage that baffles, for a while, the best efforts of the physician called, who may have never before chanced to have had a case of this kind, and, while he has in his past readings gained a general knowledge of the different methods of treatment advised, owing to his lack of previous experience, he may not call to mind many of the suggestions he has read. If, therefore, he could have placed in his hand a résumé of the literature of treatment, it could not fail to be of service to him. For example, he may have never introduced a postnasal tampon, and, while he may remember all about the Belloeq canula, he may either not possess one, or if he owns this historic instrument it may, owing to the rare call for its use, have

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become mislaid. But, granting he has his Bellocq with him and he undertakes its employment, he may, owing to its size, meet with difficulties in its introduction and use of which the text-books are silent.

As an excessive nasal hemorrhage may be dangerous, and owing to its character the tendency of the patient is to magnify its importance, the imperative call is for prompt relief. With this aim I have prepared the appended "sheet of directions," first giving suggestions to the patient which, if followed, may prove effective, and, secondly, in case of failure upon the part of the patient, to place in the hand of the physician called in such data as will enable him to successfully cope with the trouble without needless loss of time.

This system of giving sheets of directions to the patient for different purposes has been my custom for several years, and I have found it to be of the greatest service, particularly as patients are very prone to forget the details of directions given verbally. I wish to call attention to an improved technic in the introduction of the postnasal tampon.

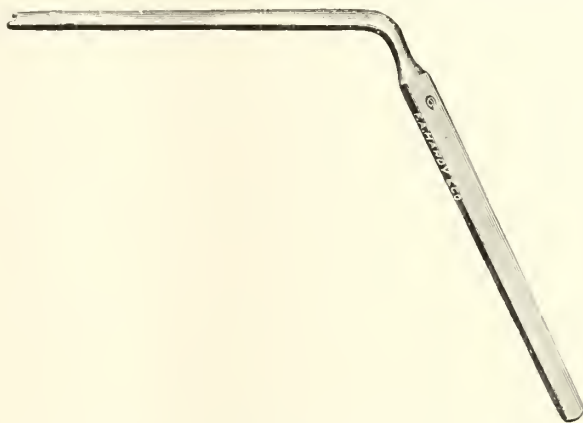


Fig. 1.—Author's nasal tampon introducer ( $\frac{1}{2}$  size).

#### DIRECTIONS FOR THE CONTROL OF NASAL HEMORRHAGE.

Sometimes the application to the nape of the neck of a small piece of ice wrapped in a wet napkin will prove efficient, also ice applied externally about the nose. Peroxid of hydrogen sprayed into the nostril with an atomizer, or even injected therein with either a dropper or a syringe, will at times prove effective. Diluted vinegar, about one part to three of water, used in the same manner, may also be of value.

In cases of hemorrhage see that the neck is not constricted—a *tight collar should be removed*. The simple expedient of applying strong pressure upon the upper lip might be tried. While sometimes effective in a moderate nosebleed, it would probably be of little use in a hemorrhage following a nasal operation. Fainting generally causes a cessation of hemorrhage; therefore, the patient should be kept standing, with head erect, and meantime instructed to take long and deep breaths through the mouth. If, furthermore, the arms are elevated above the head, the blood pressure is diminished. As this position becomes tire-

some, the clasped hands may be held upon the head. To catch the dripping blood, a finger bowl should be held under the chin and not under the nose.

The hemorrhage occurring after an intranasal operation generally requires more active treatment. Plugging the bleeding nostril will usually be found to be the best method to adopt. To plug the nostril a strip of clean old sheeting,  $\frac{3}{4}$  inch in width and about two yards in length, is required. It should be slightly smeared with vaselin. As an instrument for packing the nose a "whalebone," such as were formerly employed in women's corsets and waists, will answer admirably, and is generally available. These "whalebones" are about  $\frac{3}{8}$  of an inch in width and are both thin and springy. One end of the whalebone is to be placed about six inches from the end of the strip of sheeting, which is then pulled taught on either side thereof, when it can be introduced into the nostril near its floor to the extent of about four inches from the tip of the nose, after which the whalebone is withdrawn. A second loop of the same length in the strip of sheeting can now be taken, using the whalebone as before, and introduced into the nostril just above the first packing which should meantime be steadily held with the other hand by pressing the protruding end thereof against the upper lip, so the introduction of the second packing will not disarrange the first. In the same manner additional packings should be introduced until the nostril is well filled. While the first two packings are directed backward and downward, the succeeding packings should be directed higher and higher until the last one is directed upward, or parallel with the outer line of the nose.

While for the first two packings a six-inch loop is required, the succeeding loops employed can be gradually shortened until finally a loop of only three or four inches in length is sufficient. In this way as many as a half-dozen packings may be employed, or until no more can be introduced. After the nostril is thoroughly packed, the protruding ends of the packings can be cut off with a scissors for the patient's convenience. If after this any hemorrhage continues, it is generally either because the packing has not been well done or else from bleeding rearward into the throat.

If for any reason the hemorrhage has not been controlled, a near-by physician should be called in to whom this sheet of directions should be handed. After removal of the packing already introduced, he will probably be able to repack the nostril in an effective manner. He may elect to introduce a postnasal plug before the introduction of the anterior packing. The best method of doing this is by the use of a small-sized hard rubber Eustachian catheter, the shape of which can be changed as desired by holding it briefly in hot water. After proper shaping, there should be passed through the catheter a delicate tape, or else a string, which should be about one yard in length. The catheter can be easily threaded by first passing through it an ordinary steel piano wire (about No. 4), the distal end of which is abruptly bent upon itself so as to form a loop, through which one end of the tape is next placed.



so each loop is about  $\frac{1}{2}$  inch in length. By traction upon the wire at its opposite end the loop can be made to enter and thus the tape is drawn through the catheter until the point of the catheter is at the middle thereof. Linen tape  $\frac{1}{8}$  inch in width is to be preferred.

Should an Eustachian catheter not be available, a very fine Nélaton soft rubber catheter will do, the tape being threaded therein as before described, or else the middle of the tape can be tied about the catheter at its opening. Before introduction the catheter and tape should be sterilized by the use of a 20 per cent. solution of phenol, followed by alcohol. When thus prepared the catheter can be passed through the bleeding nostril near its floor until the tape appears back of the soft palate so it can be grasped with a forceps and pulled out of the mouth. The tape is now held at its middle and the catheter is withdrawn from the nose. In this way a double tape about 18 inches in length reaches through the nose and out of the mouth. While this length may at first seem oversufficient, it permits of the required manipulations without danger of its being lost in the nose. The free nasal ends had better be secured with an artery forceps. The next step is to cut the tape in two at its middle and knot the two tapes together about 8 inches from the point of division. Next a suitably sized and shaped postnasal tampon of iodoform gauze should be firmly secured with a second knot, after which one of the ends of the tape may be cut off. In this way a handle of tape is provided to assist the finger in the proper placing of the tampon by pushing it back of the soft palate while suitable traction is applied at the other end of the tapes. Thus after the tampon is located the tapes lie on the nasal floor. While still applying traction to the tapes the nostril may be plugged anteriorly, after which the two ends may be securely tied about a roll of gauze which closes the anterior naris.

In rare cases the other nostril will have to be similarly plugged. If the anterior nasal packings are well applied, the hemorrhage should be fully controlled. The postnasal tampon should not be allowed to remain more than 24 hours, and is easily removed (without disturbing the anterior packing, if desired) by first untying the nasal ends of the tapes, so as to free the roll of gauze, and next by moderate traction upon the other end of the tape, which has meantime been hanging out of the patient's mouth and secured to the ear with a bit of plaster.

A word may be added regarding the introduction of the anterior packings. While under directions to the patient the use of clean old sheeting has been advised, because it is always available, it is, of course, apparent that either gauze or absorbent lint would be better, and will probably be selected by the physician called in in place of the other. If gauze be employed, it had better be in strips one inch in width and about 9 inches in length, and either nosophen or iodoform gauze is to be preferred. If linen is selected, being much thicker, the strips should not be more than  $\frac{3}{8}$  of an inch in width and of similar length. In place of a whalebone a suitably shaped introducer, as shown in cut, can be better employed. Cotton as a nasal packing is not to be selected. Care should

be taken that the nostril is not packed too tight so that pressure might devitalize the mucous membrane.

Moistening the packings with peroxid of hydrogen might be mentioned, though in my experience, as before suggested, vaselin is to be preferred. In fact, grease is so often of value that a suitably shaped plug or tampon of ham fat has been advised. I would respectfully suggest to the physician thus called in the advisability of giving one hypodermic of morphin, preferably a maximum dose. Two or three 20-minim injections of aseptic ergot, or ergotole, are also of value, partially due to the nausea thereby induced. For this latter reason Norwood's tincture veratrum viride, administered hypodermically (say 5 to 10 minims), has been advised, it being also, like morphin, a cardiac depressant. The relaxation from vomiting will often prove effective. With this object the hypodermic administration of 1/10 grain of apomorphin has been employed. Bosworth recommends an emetic of zinc sulphate. As cardiac depressants and relaxing agents are chiefly indicated, it becomes apparent that alcohol in any form is to be avoided, as are also hypodermics of strychnia, atropia, etc.

When convenient so to do, astringents applied directly to the bleeding area are often effective. For this purpose a small gauze packing well moistened with a paste made by adding powdered tannin to a 20 per cent. solution of antipyrin might be suggested. Another paste which has also been recommended is made by adding 4 per cent. of vaselin to powdered permanganate of potash. As with the previous paste mentioned it should be applied with a gauze packing. As a further alternate the gauze may be moistened with compound tincture of benzoin, to which iodoform has been added in the proportion of one dram to the ounce of the tincture.

Styptic collodion, which is a combination of collodion, alcohol and tannin, is another agent which has been employed in the same manner. If the area of bleeding is well forward, of not too large size, and easily reached, the introduction of a Bernays-Simpson tampon may be selected in place of gauze. Before being introduced it should be smeared with vaselin. As it swells it will cause pressure over the area it covers. One writer has suggested a 2 per cent. solution of chloroform in water. A small pledget of gauze, well moistened therewith, can be packed over the bleeding area.

Adrenalin, 1-1000, would naturally occur to one as a proper agent to employ. In my experience it is more efficient in preventing hemorrhage than in stopping it after it has begun. In its use there is also danger of a recurrence owing to its secondary effect. If employed at all, the best method is to inject hypodermically in the upper lip on the bleeding side ten minims of a 1-2000 solution.

A particular caution I would give is to not introduce into the nose Monsel's solution or any other astringent preparation of iron. Through their use either sinus or middle-ear trouble may be induced. The value of ferropyrin for the control of hemorrhage has been highly extolled.

It is a dry powder consisting of equal parts of the chlorid of iron and antipyrin. It is applied to the bleeding area upon a small pledget of cotton or lint. Owing to the previously mentioned objections regarding the use of iron in the nose, other methods of treatment are to be preferred.

Douches of hot water directed against the bleeding area have been employed. With the many other and better methods of treatment available, the hot douche is mentioned chiefly because it is so commonly recommended in text-books. Furthermore, as the physician hastily summoned may not be provided with means for following out the course which, in his mind, is chiefly indicated, it is wise to mention any additional methods of treatment which have been suggested and which may be tried pending the delay in getting the particular things most desired. If the hot douche is employed, it for different reasons had better be a 1 per cent. solution of carbolic acid (practically one dram to the pint)



Fig. 2.—Author's nasal irrigation tip (full size).

and should be of a temperature gradually raised from 105° to about 130° Fahr. It can be best carried to the point of bleeding by the use of an oval nasal tip, as shown in Figure 2. The fall from the fountain syringe should not exceed two feet. If preferred, in place of the carbolic acid, alum may be substituted, using about two drams thereof to the pint. Turpentine and creasote, used in a similar manner, have also been advised.

Should the hemorrhage have been very free and uncontrollable a bandage placed tightly about each limb near the trunk will diminish the amount of blood in circulation. If this is done, one bandage at a time should be released, so the circulation of the limb will not be too long obstructed. In this way three limbs can be kept distended with blood.

The chlorid of calcium, given by mouth or rectum in doses of 10 grains dissolved in two ounces of water, and repeated hourly for three hours, has been employed with benefit in case of persistent and oozing hemorrhage. After the third dose it should be discontinued for a few hours before being again used. Forty to 60 grains in 24 hours is regarded as the maximum dose as an antihemorrhagic. The lactate of calcium has also been advised, a single dose of 30 grains in water being given.

Should the hemorrhage have been very severe it is advisable to administer either a full enema ( $\frac{1}{2}$  gallon or more) of normal saline solution or else the subcutaneous injection of the same fluid into the cellular tissue at the most favorable point, being the treatment known as "hypodermoclysis."

## A NEW METHOD OF PACKING THE NOSTRIL.

W. E. CASSEBERRY, M.D.

I wish to use this occasion—that of a discussion on the treatment of post-operative hemorrhage—to make a preliminary report on a method of packing the nostril, which I originated about three years ago, under the stimulus of a pressing need in practice for a reliable and harmless preventive of postoperative nasal hemorrhage. I commend the expedients of the essayist, especially the recommendation to supply the patient with a sheet of written instructions to govern his action in the event of bleeding, and I formerly handed him also the materials ready prepared for self-introduction, of the sort of gauze tampon which Dr. Ingals has described. Now, however, in place of this uncanny precaution, I regularly introduce as the last step of the operation, my new preventive tampon.

The packing of the nostril, including the insertion of a plug in the posterior naris, is at times an absolute necessity in order to control the most dangerous type of postoperative nasal hemorrhage, that which is liable to ensue from cutting a branch of the postnasal artery, as, for instance, in making a full length turbinectomy or in the radical ethmoid operation. The superior efficacy of the posterior plug over an anterior pack used alone is due to the ring-like conformation of the choana, against the bony edge of which the main vascular stem as it emerges from the pheno-palatine foramen, together with its larger branches, is certain to be compressed by any plug which firmly fills the choana. But the painfulness of the customary manner of packing with gauze, especially in connection with a posterior plug, the disposition of gauze to adhere so intimately to the wound as to preclude its removal under forty-eight hours without causing hemorrhage anew and the liability especially of the postnasal plug to cause abscess of the ear, have deterred many from using any sort of pack for the purpose only of preventing hemorrhage and have deterred all from inserting a posterior tampon excepting to meet an urgent necessity.

It is obvious, therefore, that a preventive tampon of a form which, while affording safety from hemorrhage, shall be in itself safe, and which, though inserted from in front shall embrace the merits without the demerits of the posterior plug, would serve to extend the benefits of nasal surgery and to lessen the anxieties of the nasal surgeon. Impelled by feeling my own anxieties in this respect to be quite disproportionate to the minor character of most of the operations performed, I devised a new method of packing the nostril and posterior naris, which I have used with satisfaction during the last three years, having found it to be a simple, safe and effective method, the materials for which are commonly available. The tampon is composed of a rubber finger cot or preferably as now perfected in shape, of what might be called a club-finger cot, which, after insertion into the nostril, is filled by means of a tubular packer with a strip of sterile gauze  $1\frac{1}{4}$  inches wide by a yard or more in length. The finger cot and packer having been sterilized by boiling, the packer ready armed with gauze, is used first as a stem on which the rubber case, lubricated and held for the moment lengthwise on the stretch, is carried into place in the nostril. Both the packer and cot are then in position to pass the gauze, which at the start should be packed with special firmness, in order to form the posterior plug by an overdistention of the closed end of the finger cot where the rubber is reinforced to withstand the strain. The club-finger cot with its bulbous closed extremity and proximal slight constriction of its caliber is especially suitable for forming such a plug in and behind the posterior naris, but a large size ordinary finger cot or one cut from a surgeon's rubber glove, can be made to serve the purpose almost as well by the exercise of judgment in placing and filling it. Not only are the insertion and withdrawal of this form of tampon comparatively free from the pushing and pulling requirements of gauze alone, but its smooth surface permits of ready detachment from the wound as soon as its purpose is fulfilled, usually by the end of 18 hours, instead of 48, when by first withdrawing



the gauze from the rubber the flaccid case will slip from the nostril. While the presence of any tampon in the nose for a couple of days or more is a great hardship, as well as a menace to the sinuses and ear, the discomfort of this tampon for a single night is well tolerated, as the patient can feel assured of its removal the next morning; and as it resists putrefactive changes, being for the most part non-absorbent, I believe its use for this brief period to be entirely free from danger of infection of the middle ear or nasal accessory sinuses.

It remains, then, to speak further only of its efficiency, which no doubt will be found to vary, as with other tampons, in accordance with the degree of compactness and also dexterity with which it is inserted. I have personally employed this form of packing in from 50 to 60 private cases, having adopted a routine of inserting it as a precautionary measure, immediately on the completion of all intranasal operations of the sort which experience has taught, are prone to a continuance or recurrence of hemorrhage during the first day and night. Of this number, including turbinectomies, septum and sinus operations which ordinarily would have given occasion for several night calls to stop hemorrhages more or less severe, in only one did the tampon fail of its purpose, and then for the reason that, in order to minimize the discomfort, the packing had been left too loose. The bleeding in this case, which commenced about four hours after a full length inferior turbinectomy, was profuse and proceeded from far back in the nostril, having been, therefore, of the type which is best controlled by a posterior plug. It was this incident which led me to perfect the plain finger cot then used, into the club-finger pattern in order that its bulbous extremity when overdilated with gauze might compress the posterior vessels against the ring-like boundary of the choana and thus exert the same pressure effect as a regular posterior plug, a preventive pressure which is especially indicated whenever this type of hemorrhage is to be anticipated.

The primary purpose for which I devised this new method of packing the nostril, and for which I now recommend it, is to serve as a preventive of hemorrhage rather than to control a vicious bleeding when already in progress. Not being equal to free gauze in coaptability to a highly irregular surface, nor in extreme power of compression, one can see that it might not be capable of stemming the tide when in full flow; nevertheless, I confidently expect that in the majority of cases experience will prove it to be capable of control as well as prevention.

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## REPORT OF THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.\*

A. E. SMITH, M.D.

FREEMONT, ILL.

*Mr. President and Members of this Society:*—There is a trite saying that "all work and no play makes Jack a dull boy." Assuming that this is true, perhaps it may lend zest to the interests of our society meetings to have now and then a paper that can not technically be called scientific. With the preceding thought as a suggestion, and at the request of the secretary, I have endeavored to combine and reduce to writing some facts relative to earlier views on tuberculosis; the necessity for interest in and the results obtained by the holding of international congresses for the purpose of still farther studying the question in all its varied phases, for they all directly or indirectly affect man's

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\* Read before the Stephenson County Medical Society.

health, happiness, well-being and wealth; the significance of the assemblage in this country; what it means to the American people, because of the position that this nation now holds in the eyes of the world; the official national attitude toward the congress primarily and latterly; the local arrangements and the efforts of those directly responsible for the success of the congress, and the exhibits and displays on the floors of the New National Museum Building, Washington, D. C., where the sixth and last International Congress on Tuberculosis was held during the latter part of September and the first part of October. The first International Congress on Tuberculosis was held in London, England; since then France, Russia, Germany and Austria have each enjoyed the honor of entertaining the assembly, and the seventh congress will be held in Rome, Italy, in 1911.

In some manifested form tuberculosis has existed since the earliest history of medicine; Hahnemann used the term *psora* to signify a hydra-headed miasmatic source from which he says sprang seven-eighths of all chronic diseases, and owing to its highly contagious nature there were few who escaped it; the manifested forms of which were called scrofula, rickets, atrophy, marasmus, consumption, pulmonary consumption, tabes, laryngeal phthisis, etc., according to bodily constitution, defects in education, habits, employment and circumstances, as also modified by the various psychical and physical impressions; the other one-eighth, he said, were chargeable to two other miasms, syphilis and sycosis, thus making three sources from which all chronic diseases sprung, but that there might be a combination of any two or even all three causes. Phthisis is a Greek word and was used to indicate a flesh-wasting pulmonary disease. The term tuberculosis was first used by the German professor, Schöenlin, in 1839, only about nine years after the advent of Hahnemann's miasm *psora*. The word tuberculosis was considered by Klebs an unfortunate term, because it does not always imply tubercle and, therefore, is misleading. Whitaker says that, up to 1878, tuberculosis was considered a secondary trouble and incident to any inflammatory condition, and that the possibility of individualizing the different manifestations was as hopeless as the possibility of curing it. Koch, in 1882, discovered the specific germ that for all time to come puts the stamp upon the tuberculosis of to-day as a miasmatic disease and, therefore, classifies it as a trouble equivalent to if not identical with *psora*. In accordance with the pathologist, Virchow, we have the manifested effects of *psora*, *discrasia* and tubercle practically inseparable so far as their being causative identities in producing symptoms significant of disease.

The exact mode of entrance of the tubercular miasm into the system is still in a speculative condition. Quoting from Osler's latest work on practice, he says: "Baumgartner and his followers assume that the tubercle bacilli can lie latent in the tissues and subsequently develop when, for some reason or other, the individual resistance is lowered, and explains the lack of development of the germs by the greater resisting powers of the tissues of children." We are alive to the fact that the

assiduous research efforts of all of these great, wise and progressive men have helped a comprehensive ray of causative light relative to the origin, nature and effect of chronic diseases in the human organism. In the treatment of chronic medical diseases, especially of tuberculosis, which stands at the head as a thwarting demon of man's physical existence, we are, after all, compelled to concede the necessity of taking into consideration the uncertainty of an unknown quantity, viz., metabolism; this we are ever called upon to deal with in etiology, pathology, treatment and even in prognosis; it is when we recognize this unknown quantity, and only then, that we are in the best position to realize why those that have gone before have left so many problems medical still unsolved and make the necessity of constant investigative efforts so strikingly apparent to us.

The necessities for prompting and holding international congresses to consider the question of tuberculosis are its increased prevalence, due to neglected sociological and hygienic conditions; the stimulus that such gatherings produce on the impressionable minds of those that are susceptible and stand in a position to obtain more positive knowledge of the subject in all of its phases, and the awakening produced on the public mind in general as the world's authoritative mind speaks in unison. Since it has been demonstrated that this affliction can and will be the death of nations unless steps are taken to control it, and, further, since old-time conclusions relative to the curability of the disease have proven to be erroneous, it is left to the scientifically disposed and those ambitiously interested in suffering humanity and longevity of life to proceed with stoicism against this common enemy that thrives under insanitary conditions in all of the various countries on the earth's surface. There seems to be no climatic boundary, for the ravages of this disease are felt equally as keen in the tropical countries of the south as in the countries of the frigid zone in the north. Not even constant and moderate temperature in the bowels of the earth seems in the least to modify the onward march of this grim warrior when once he has, in one form or another, assailed his victim. A number of years ago a tubercular colony was established in one of the chambers of the Mammoth cave, where the temperature rarely varies more than one or two degrees in the course of a year. They were sustained under the most favorable dietetic provisions. For a time they were extremely hopeful and not until a number of the colony succumbed to the life-destroying malady was the hope of the survivors abandoned. Of course, in this experiment two practically demonstrated great essentials were sacrificed, viz., light and oxygen-laden air. Not only has more modern science accurately theorized that light and oxygen are a positive necessity, but experimentation has proven that without them the consumptive is doomed, for neither high, dry nor rarified atmosphere or an even temperature can save the consumptive. It took science hundreds of years to learn all that we know relative to tuberculosis, and hundreds of thousands of lives were sacrificed under the early theories in the climatic experimentations. Even now the greater portion of the general public and a goodly number of the profes-

sion are still laboring under erroneous ideas in regard to this matter of climate for the successful treatment of tubercular subjects. There is a ray of hope that through the holding of international congresses their educational influence will help to penetrate this dense blanket of false presentation of the subject, thereby revealing the real essentials in the treatment of this affliction that it may be presented and accurately understood and wisely acted upon by the afflicted and those that directly control them.

That there may be virtue in a wisely selected climate for consumptives no careful investigator doubts; but there are so many contingencies that must be taken into consideration it behooves a medical man to be extremely chary of his advice to tubercular subjects on this question. These international congresses do not aim to deal simply with the finished product, as it were, but they aim to consider the problem from its earliest and most remote cause, and, while errors may have crept into their deliberations both as acts of omission and commission, they are but the natural outcome from the imperfections in the operation of human reasoning. There was a time when the treatment of tuberculosis was not considered from the standpoint of a contagious or infectious disease, but as a purely hereditary trouble. When a family were once looked upon as being afflicted with the malady it was considered that they would succumb to it as they reached that doomed certain age or period of life, no matter what form of heroic treatment or climatic change might be adopted for them; if they escaped the appointed time, however, they were to be congratulated as being most fortunate, indeed. Now, we know that tuberculosis originates from a miasm, that it is both an infectious and contagious disease, and that it may be transmitted by any of the ordinary routes of conveyance of such disease-causing factors; that the specific morbid agent which causes it is more tenacious to life and capable of proliferation under much more unfavorable circumstances than most any other morbid agent, and that, while it has a selective and distinctive affinity for certain tissues of the human body, yet there are no tissues but what will tolerate its presence, and with favorable idiopathy may even become hot beds, under certain unhygienic circumstances, for a rapid proliferation in the process of development.

There are no individuals but what may feel temporarily the clutch of this great life destroyer under negligence of proper hygienic surroundings. Careful scientific investigation has demonstrated that all deaths that occurred after the thirty-fifth mile-stone of life had been reached bore the mark in some one of the tissues of the body of having been infected with tuberculosis. We know that the question of the development of tuberculosis in families is not the transmission of a specific germ life, but the quality of soil, as it were, that has been inherited. In this idiosyncrasy of the individual is to be found the resistive force against the invasion and development of disease: here psychology's climax may be reached, for in the conception of mental and physical life are laid the foundations for the individual's resistive forces; under the strain of popular opinion, based on the faulty reasoning of inherit-



ancy, human beings may sink to the lowest ebb of resistance against the invasion of morbid germ life, all physical resistance yields under this mental persuasion, and the product of conception under such circumstances is a hot bed, when once infected, for the breeding of morbid agents that tend to destroy human life; while, on the other hand, the product of conception under proper mental and physical hygiene assist in developing mental strength and determination, thereby increasing physical resistance, and tending largely to check susceptibility to the invasion of morbid agents in the tissues of physical man.

The standard and popular opinion in the medical profession of foreign countries is not radically different than what we enjoy at home. and, while some of the purely scientific questions on tuberculosis have been more dexterously handled by some of our professional brothers across the sea, there are none that can compete with some of our home men in handling the question from a successfully practical standpoint. When a little over two years ago the question of entertaining the International Congress on Tuberculosis in this country was discussed before the joint session of the American International Congress on Tuberculosis and the Medicolegal Society of New York at the Hotel Astor, it was under the sanction of the United States government and was for the formation and urging of legislation to prevent tuberculosis. Governmental statistical reports of the death rate from tuberculosis in this and many other countries had attracted the attention of officials high in governmental affairs. The prominence among the first nations of the world to which this country had risen within the last few years, and the appalling mortality rate that tuberculosis has reached in the statistical area of this country, made it seem fitting that the next International Congress on Tuberculosis should be held in the United States. Accordingly officials were elected at this joint session to begin the prodigious task of preparations for entertaining the congress. Dr. John S. Fulton was chosen, as secretary general, and after spending two years of his time ceaselessly in the task completed his work with great credit to himself, satisfaction to the profession and honor to the country. This great preparatory work was accomplished only after many ponderous obstacles were overcome. The Congress of the United States primarily and individually favored the International Congress, but were opposed to a national recognition and financial support. After much concerted labor on the part of those interested in the success of the international congresses, and after a pledge not to ask financial aid from this government, the goal was finally reached and the International Congress secured national recognition and was permitted to issue invitations to foreign countries to send national delegates to the International Congress on Tuberculosis in this country.

As the congress had been entertained at the capitals of other countries and with national recognition, it would be only fitting that they should be entertained at the capital of this country. So one of the next great obstacles to overcome was to secure suitable quarters to house the congress and their exhibits that it might be a credit to this country in

the eyes of foreign delegates. With the exception of the capitol building, there was but one building in Washington which could properly house the congress, viz.: the Congressional Office Building. This building is under the control of the House of Representatives, and the consent of each United States representative must be secured singly in order to procure this building. To those that have had occasion to request busy congressmen to consider matters not directly appertaining to national affairs of the government, matters where finances or huge trusts are involved, or their election, know how difficult it is to secure their attention. Fortunately for the International Congress on Tuberculosis there was in Washington being erected the National Museum Building, which by the time the congress was to meet would be so far complete as to make it possible for the congress to occupy it, and while, although under course of construction for a period of two years, it had none of the artistic touches of a complete structure, such as the International Congress had been entertained in in foreign countries, it was, however, accessible, convenient and its capacity adequate.

Dr. Fulton's eventually well-laid and worked-out plans for the success of the congress consisted of a local committee to look after the local arrangements, besides committees that were appointed from each state of the Union; the governors of individual states were asked to consider the matter singly and to appoint delegates to the congress: members of the medical profession that were interested in national and state medical societies were solicited and urged to take an active part in the work, especially in the way of securing active members.

At the opening of the congress, forty-six foreign countries were represented by officially appointed delegates, and the active membership list reached the 6,500 mark, while at the meeting in Paris, three years ago, the active membership list reached only the 3,500 mark. The most extensive foreign exhibit was from Germany, while at home the New York State exhibit exceeded any other. The exhibits, any section of which was a worthy study of no mean value to either a professional or layman, consisted of charts showing the topography of country, both local and general as it might naturally appear, indicating the favorable and unfavorable selections of building sites for residences and out-buildings for stock and milch cows, together with models for the construction of residences and out-buildings, that their ventilation might be the most complete and perfect and the least liable to retain or convey tuberculosis; models illustrating the construction of public buildings, city residences, tenement houses, sanitarium buildings for the treatment of tubercular cases; carefully prepared specimens in jars of preservative fluids, to retain the most natural appearance, of thousands of different parts and sections of the bodies of man and animals, showing not only the earliest signs of tuberculosis in organs and tissues of the body, but the far-advanced stages in the ravages of this disease. Instructors were in attendance at many of the exhibits, and lectures were given from time to time to the laity as well as to the profession, different systems were demonstrated under varying environments, showing

how under adverse circumstances one might still acquire or retain sufficient resistive force to avoid the development of tuberculosis.

The question of human contamination from the bovine tubercular bacilli was hotly discussed, and Prof. Theobald Smith, of Harvard University, wrung from the immortal Koch, who has up to the present time contended that man is not susceptible to the bovine tubercular infection, in a semi-private seance at the Willard Hotel under date of Oct. 3, 1908, an acknowledgement that his experimentations and demonstrations, too, had proven that man is susceptible to the bovine tubercular bacilli, but that at the present time a public acknowledgement of the fact would be disastrous to himself and his relations to the German government, and that if the matter was to be pressed to a finish he would absent himself from the congress rather than make a public statement of that kind, as it meant so much to Germany, as at the present time their meat products have been prepared under his former idea, and that if he should now renounce his former views and proclaim the views of Professor Smith it would balk the home German meat trade and they would demand American meat, as that is prepared in accordance with the findings and demonstrations of Professor Smith.

Professor Detre, of Budapest, asserted and proved by actual demonstration, before the class of scientists (Professor Koch included) in the Washington Tubercular Hospital, that tuberculosis contracted by a human being from the bovine was distinguishable from that contracted from man, as cases of bovine origin reacted only on bovine tuberculin test. Dr. M. P. Ravel, of Madison, Wis., and Dr. F. Arloing, of France, were among the warm pursuers of Professor Koch on this question, contending that bovine tuberculosis could be conveyed to the human, and in such cases the lymphatics, bones, joints and peritonæum are likely to be the seat of infection, while pulmonary consumption was more than likely to be from the human tuberculosis.

The average attendance at the general assemblies, subdivisions, lectures and demonstrations was about 6,000 a day during the official congress. The actual expenses of the congress amounted to about \$160,000.00, and, outside the thirty-odd thousand dollars received as membership fees, the balance was made up by philanthropically inclined individuals of this country. Dr. Lawrence E. Flick, of Philadelphia, was one of the most liberal subscribers to this fund and there are many others who, realizing what the annual death rate of 160,000 individuals from consumption means to the American people and this country, and that if we desire to maintain the standing that we have acquired among the nations of the world, it behooves us to be even in advance of the efforts of all other nations to save the lives of our country's subjects and to be abreast of all people in scientific investigations, especially where the health of the nation is involved.

As an incentive to the highest type of scientific papers, lay presentations of the subject, preventive work actually being accomplished by institutions and the best exhibits, attractive rewards were offered. Besides \$5,700.00 as cash prizes, more than one hundred gold and silver

medals (worth several times the cash amount) were selectively given from a meritorious standpoint, determined by the committee in charge. Some of the subjects on which competitive awards were bestowed were: the best plans for the prevention of tuberculosis; the best evidences of effective work in the prevention of tuberculosis; the best exhibit of an existing sanitarium for the treatment of tuberculosis among the working classes; the best dispensary for the treatment of tuberculosis among the poor; the best exhibit of a hospital for the advanced cases of pulmonary tuberculosis among the poor; a tract on the plain facts about tuberculosis, and numerous other leaflets and tracts treating of different tubercular topics; the best exhibits illustrating different phases of the invasion and effect of the tubercular bacilli in the tissues of the body; the best effective organizations in preventing the spread of tuberculosis; the most effectual treatment in the different phases of tubercular infection, etc.

Needless to say that the United States competitiveness carried away many high awards and honors, as at the present time the people of no nation are making such heroic efforts to care for cases of tuberculosis or prevent the spread of the disease. The official representative of the Chinese government did this country the honor, in his initial address at the opening of the congress, to say that, "owing to the accomplishments of the American people from the educational standpoint and from actual results obtained in the treatment of tuberculosis, his countrymen were looking to the United States as their succors from the destruction of their nation by this affliction, as there are no people on the face of the globe who have a greater per cent. of tubercular subjects among them than the Chinese."

The active membership fee in the International Congress on Tuberculosis has always been \$5.00 and the transactions have been supplied when published to all active members without further expense to them. The published Transactions of the Sixth International Congress, which will consist of five bound volumes, will now sell for \$20.00. Deliveries will begin in February or March of this year, and I feel that all who became active members are to be congratulated, as no other publication will ever contain so vast a treatise on every phase of tuberculosis, and for years to come no publication on this subject will probably be compiled or written by a greater number of recognized authoritative authors of the world.

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### LA GRIPPE AND ITS COMPLICATIONS.\*

JAMES W. DUNN, M.D.

CAIRO, ILL.

La grippe has continued to appear every fall, winter or spring since its advent in epidemic form in 1889. Prior to that time, for a great many years, it was known to exist on the steppes of Asiatic Russia and

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\* Read at the December, 1905, meeting of the Alexander County Medical Society.



other places in the old world. Before the date given, we had in this country occasional attacks of influenza during the winter months, but it was never of that severe epidemic type that familiarized the American continent with the term "la grippe." It was supposed to be due to climatic conditions then. When the first epidemic came, various theories were advanced as to its cause in that form. About the most popular was the one that had its origin in the statement that the earth was passing through the tail of a comet, or had encountered in its travels through space a cloud of stellar dust. The theory of the microbic origin of disease was not nearly so popular then as now, so that successive epidemics occurred before the real cause of the trouble was found. Finally its microbe, the *Bacillus influenza*, was discovered. Very rapidly this discovery was verified throughout the world, so that soon all doubts on the subject were dispelled.

Among its peculiar features I may mention the fact that it seems to have a ferret-like ability to select weak spots, especially of the nervous system. According to observers, it is paresis of the nerves supplying the different organs of the body that causes the gastrointestinal, the meningeal or the pulmonary complications. A second feature is its greater prevalence during relatively warm and moist weather, though it may not be entirely absent in dry cold weather. The only other peculiar feature that I wish to mention is its strong tendency to relapses and to complications. The complications referred to here are not those from involvement of the different organs of the body, but those from streptococcic, staphylococcic and diplococcic infection.

The diagnosis is easy sometimes; difficult at others. If grip is prevalent, and we have a case that gives a history of a slight chill or chilly sensations, catarrhal symptoms of the upper air passages, slight fever, cutaneous hyperesthesia, and great muscular pains, we are apt to have a patient with this disease. But we want to be sure. Then the microscope can make us almost positive—about as positive as when we find the Löffler bacillus or the bacillus tuberculosis in the sputum. The recognition of the *Bacillus influenza* is said to be fairly easy. But a great many will wish to make the diagnosis reasonably sure without the aid of the microscope. Then to the symptoms given add these: a red stripe on the anterior surface of the soft palate. The stripe is dark or bluish-red, about 4 mm. in width, and presents the form of a rainbow, only it is not complete above, being interrupted by the base of the uvula. It is never complete on this. To this add a granular condition of the soft palate, the granulations appearing as small whitish projections like so much sand sprinkled on the surface. To this add also the swelling of the papillæ of the tongue, especially at its anterior end, and the quite frequent enlargement of the spleen. With all of these conditions you may make a diagnosis of la grippe. If a sufficient number of these are not present or well-marked, reason by exclusion, and so come to the safest diagnosis.

I will touch upon the subject of its general treatment before taking up its complications, as the treatment of its complications will not be

covered by this paper. Notice I said "touch upon the subject of its general treatment." I did this advisedly. No specific for the disease having been discovered, we are left to treat the same on general principles and symptomatically. That means that each physician has his favorite line of treatment. Mine is salol, salicylate of sodium, phenacetin and a laxative in capsules. This to equalize the circulation, control the pain and arouse the emunctories. Try to control the patient and to prevent complications. I do not defend this treatment particularly. I do not say it is the best. I use it because it seems best to me. One other point: La grippe is infectious and contagious. Use a little prophylaxis, if possible. Put your patient in a room apart from others and close the doors communicating with other rooms. Let no one near the patient but the nurse. Also, when the patient is better watch for and warn against relapses. There is no disease so prone to relapse. As the witty Irishman said, "La grippe is that disease that keeps us sick for three months after we are entirely well of it!"

Most authors make three types of the disease. I present to you four, namely, the meningeal, the catarrhal, the gastrointestinal and the neuromuscular. It is not necessary to dwell upon these, as their names are sufficiently indicative of their meaning. If the statement already made is true, that the grip bacillus has a way of attacking one at his weakest point, the temperament, the occupation, the previous condition of the patient, will have a great deal to do with the type his attack assumes. So also will the complications presently to be mentioned be determined greatly by the character of the attack; therefore, the temperament, occupation, etc., of the patient.

The surgical complications I have seen and been able to find reported show a remarkable range. They include ulcerative stomatitis, general osteomalacia, suppurative parotitis, abscess in different parts of the body, gangrene of the lungs, epididymitis, orchitis, pyemic joint affections, thrombosis, etc., and surgical affections of the eye, ear, nose and throat. Against these are affections of the nerves that have led to mistaken diagnoses, as, for instance, neuritis of the lumbar nerves that has been mistaken for peritonitis and appendicitis with unnecessary and inexcusable surgical interference and of the axillary nerve simulating rheumatism. Such mistakes and the great liability to infection during an attack of la grippe have led many authors to sound a note of warning against undertaking too readily surgical operations during the prevalence of this epidemic.

Taking up the complications more specifically, we have meningitis and cerebrospinal meningitis as the most frequent complications of the meningeal type. The meningitis from the influenza bacillus is hard to differentiate from that of mixed infection. Indeed, the infection is probably always of the mixed type. So, too, the cerebrospinal meningitis is hard to distinguish from epidemic cerebrospinal meningitis or spotted fever. Cases have been reported where the microscope alone could make the distinction.

As the catarrhal type is the most usual one, pneumonia and tuberculosis are the most common complications. The pneumonia is oftenest from mixed infection. The tubercular infection is the most likely to obtain the more prolonged and depressing the attack. It occurs oftener, however, than is generally supposed. Indeed, some observers have noticed the increase of consumption during the prevalence of la grippe so strongly that they have been led to cry out against the custom of allowing grip patients to go unregulated while attempts were being made to control tuberculosis. The pneumonia is often of the type called fulminant. These cases seem to depend upon a paresis in the capillaries and arterioles of the lungs and it is in keeping with the statement made elsewhere, that the bacillus appears to have a predilection for nerve tissues. They usually lead to fatal termination quickly.

The gastrointestinal type may be marked only by griping of the bowels; on the other hand, there may be great nausea and diarrhea. This may pass off in a few hours, or the diarrhea may continue till it becomes a question of whether or not the patient has la grippe or typhoid fever. Some physicians have noticed the eruptions on the abdomen of the latter disease in these prolonged cases.

The last type, the neuromuscular, may be marked by a severe soreness of one or more muscles, a neuritis of one or more nerves, or a paresis or paralysis without any apparent neuritis. However, these cases are probably all a neuritis. If the trouble is in the small nerve ends, it appears as a muscular inflammation or soreness; if in a large nerve near the surface, we call it a neuritis; if in deeply-seated nerves, we may have the paresis or paralysis without being able to locate the point of the neuritis. I have seen two intestinal cases—one a Bell's paralysis on the left side from a neuritis of the facial in the Fallopian aqueduct, the other a general paresis of the whole right side of the body. The other symptoms, microscopical examination and subsequent history showed that each was la grippe.

Probably the most frequent throat complication is peritonsillar infection leading to abscess. I have seen a great many of these. They were especially numerous in the epidemic of 1906-7. Of course, the infection in these cases is a mixed one. The most frequent suppurative nose complication in my experience has been in the ethmoid cells. I have not had a suppuration in the antrum of Highmore nor in the sphenoidal sinus nor in the frontal sinus. However, I have seen many cases where I diagnosed involvement of the latter, but was happy in being able to relieve the trouble before suppuration occurred. This is true to a less extent of the other sinuses mentioned. The treatment in the non-suppurative cases is general treatment for la grippe, with local applications to relieve the inflammation and to destroy the bacilli as far as possible.

The eye complications are very numerous in numbers, but not in kinds. I have not seen a case of optic neuritis from la grippe, but one has been reported. I have had, however, a case of cyclitis and several of iritis. The former was monocular, came on during a general attack

of la grippe of moderate severity, and left no bad sequelæ. There was no conjunctival secretion, but well-marked redness around the cornea, considerable over entire sclerotic, some photophobia, extreme tenderness over ciliary body, especially above, a very fine exudate in the aqueous, and one night of terrific pain. The treatment was that for the general disease, with suitable topical applications for the local trouble. The course of the disease was three weeks. The cases of iritis were not marked by anything to distinguish them from ordinary iritis, excepting perhaps their stubbornness and pain which seemed out of proportion to the severity of the attacks. The diagnosis was based on the concurrent attacks of general grip and exclusion of other causes. The most common eye complication of la grippe is conjunctivitis. It is very frequent, not always associated with a general attack of the trouble, nearly always purulent, but the discharge is not so profuse as in the ordinary epidemic variety. It is sometimes almost without discharge and appears as an ordinary "cold in the eyes." The inflammation is caused by the *Bacillus influenza*, but it is soon complicated by other infections, as the conjunctival sac always contains other bacilli.

There are certain noticeable peculiarities about the usual ear complication, namely: It is very often non-exudative, non-suppurative, affects the hearing very profoundly, yields very slowly to treatment, limits itself to six to eighteen hours of excruciating pain, and is then quiet unless exudation and suppuration follow, when it may lead on to suppurative involvement of the mastoid, the membrane flaccida shows the greatest amount of redness, this redness extending outward in the auditory canal, especially above, and the Eustachian tube is nearly always patulous. These things would indicate attic inflammation, and such it is. Why this part of the tympanic cavity is particularly involved in these cases I am unable to say.



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MARCH, 1909.

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## FINAL EDITORIAL NOTE ON FEE SPLITTING.

That secret fee splitting between the family physician and the consultant is an evil prevailing in this and other states can not be successfully denied; that divers views upon the ethics of this subject are held, and that no well-considered plan for its extinction has been devised, we believe is also true. Our correspondence columns have for the past three months been furnishing interesting reading upon this subject. We find other societies are taking up this subject. Dr. R. E. Skeel, of Cleveland, recently read a paper before the Academy of Medicine of that city upon the subject of "The Ethics of Specialism," which appears in the January issue of the *Cleveland Medical Journal*, and from this article we make the following extracts:

"That it (fee splitting) does exist, and also that it is fairly widespread, is, nevertheless, absolutely certain. My first contact with this side of the financial aspect of modern medical practice came while I was a very young and inexperienced practitioner, when I was approached by a specialist who remarked that he would, confidentially, of course, give me 25 per cent. of any fees which he collected from patients whom I might refer to him. I had no cases in his line and so received no commissions. I have no doubt that I should have accepted this offer had the

opportunity arisen, because I saw no harm in it and scarcely understood the need of secrecy. I had never been taught differently, and should have blundered in this as I did in many other ethical matters during my first years of practice, when ambition to get ahead was uppermost and no decent perception of the other man's rights had been hammered into my head. All this aside, however, I then became aware of the fact that fee splitting and commission giving did exist.

"Later the other side appealed to me after this fashion: An elderly, very respectable out-of-town physician requested me to name a fee for a given operation, saying that his patient was in very moderate circumstances, and I consequently gave him a figure approximating one-half the usual fee for such a case. Arriving in the city a day ahead of his patient was the gentleman's letter saying that he had told his patient the total fee would be double the amount I had stated, and from this I should collect my own fee and the hospital bill (which would be small), and that if my conscience hurt me, a check for the balance to him would be acceptable. I entered into a little correspondence in an effort to ascertain what his previous 'business' arrangements had been, but my friend was wary and did not reply. When the settlement came I did as directed, but instead of sending a check to the doctor gave the balance back to the patient's husband and requested him to turn it over directly. Curiously enough, I never received another case from this source. As I knew who had previously done this man's work I was quite convinced that fee splitting did exist, and that it came out of the patient, not the surgeon. Again, in going out of town to operate, I told the patient before her physician what the fee would be. After the operation the doctor counted out the money, letting go the last few bills very reluctantly. He then requested me to see, without charge, a patient for him, which I did willingly, advising operation. The advice was followed, but as a surgeon was summoned from a distance it became perfectly apparent to me that a fee was collected, and again I was convinced that fee splitting was expected, if it did not exist.

"I could take up instances when one consultant gets all the desperate emergency work from a physician, and another all the deliberately planned special surgery for well-to-do patients, and might hazard a guess that one consultant split fees and the other did not.

"These details are not necessary to prove to the profession that the custom is fairly common, but the unfortunate thing is that the general public is also aware of it. In a recent number of the *Literary Digest* there appear some extracts from a paper by Dr. J. C. Munro, of Boston, upon this subject and comments thereon. The question which we should discuss in all its bearings is the right or wrong of the matter. Is the section of the Principles of Ethics, touching on this subject, antiquated and behind the times, or is it right, and the men violating this section fit subjects for discipline, and, in addition, morally blind to the best interests of their patients?

"That there is a seeming injustice in the family physician making one visit and collecting for that one only and then turning the case over

to the eye man, or the surgeon, who will collect the large fee, is also painfully apparent. Is this seeming injustice to be rectified, however, by the specialist charging too large a fee and rebating to the first attendant? If the case is an operative one the family will expect the physician to be present, and in many instances the patient would be much better cared for by his occasional if not constant attention. Is the work any better done for the patient, or is the intelligent patient any better satisfied if he or she thinks the specialist is charging an exorbitant fee and the family physician contributing his services, or will the patient estimate the physician's worth by his own apparent estimate of it, viz., nothing?

"There are instances, I know, when but one fee can be charged but two must be paid. Such instances are largely found among unintelligent foreigners who will pay but one, but even then is it better merely as a matter of policy to let them think they are paying but one and the other is charity, than it is to tell them frankly that their physician must be paid and that his fee has been added to the specialist's? A similar condition may arise when the specialist operates away from home, or upon a case in a private house and the family attendant has charge of the after-care, but here it is self-understood that both men are being paid, but for services rendered by both, which is quite different than the practice of asking the family attendant to assist or give the anesthetic or perform some other minor service and then tendering him one-third or one-half the fee. The latter does not differ in principle from plain commission paying.

"The most serious evils that must of necessity spring from fee splitting are the sale of patients to the highest bidder, whether competent or incompetent, honest or dishonest; the drumming up and performing of unnecessary operations merely for the money there is in it, trafficking in one's own flesh and blood, as Joseph Price puts it, and constant and mutual deception which is going on, for doctors, after all, are but human beings. Among them are to be found all classes just as would be found in any other aggregation of professional men, and no way has yet been devised which will keep the crooked man out, or put him out after he is in, if he is not only crooked but clever. Is there no way by which the referring physician can be recompensed except by the payment of cash? And if the cash must be paid, can not some way be devised by which it shall come out of the man who should pay it instead of the innocent third party, the patient?

"Does proper and efficient service, sending the patient back to his own physician, assisting him in every proper and decent way by giving a helping hand whenever needed to all his patients, rich, poor and poverty-stricken alike, for a large, small or no fee at all, and bearing all the responsibility for disasters that are sure to come, and assisting in every legitimate way to see that the family attendant's services are adequately appreciated and paid for by those to whom they are rendered—does all this discharge the obligation which the consultant undoubtedly owes? If it does, then fee splitting is derogatory to professional character, and those who habitually give or take commissions should be forced

to stop or leave the organized profession. If it does not, then those of us who have been old-fashioned enough not to do it are guilty of the grossest injustice to our personal professional friends upon whom we are dependent for our livelihood."

Another notable contribution on the subject is the action of the councilors of the Texas State Medical Society, which, while it does not cover all the ground, makes a creditable attempt, and until some more complete statement of professional views is possible may well stand as representing the attitude of ethical men on the subject. The statement of the Texas councilors, taken from the February issue of the *Journal of the Texas State Medical Society*, is as follows:

The Board of Councilors, the Court of Medical Ethics of the State Medical Association of Texas, at its last meeting adopted the following explicit resolutions:

#### RESOLUTIONS ON DIVISION OF FEES.

WHEREAS, The Board of Councilors of the State Medical Association of Texas has been called upon for a decision as to the ethical nature of the practice of dividing fees, that is, giving or receiving commissions or rebates without the patient's knowledge, as between the specialist and the general practitioner; and

WHEREAS, The board having given the matter careful consideration, and recognizing the importance of the subject and its far-reaching effect, does hereby unanimously

*Resolve*, That in its opinion said practice, or any modification thereof, is not only unethical, but unjust to all concerned; *that it is unethical* in that it tends to commercialism, to place money before professional skill, to make the patient a commodity to be disposed of for a price, thereby constituting a breach of sacred trust on the part of the physician in that he deceives and fails to deliver to his patient that which he has sold—his honest opinion as to where the most skilful special treatment can be obtained; *that it is unjust* in that the practitioner takes unearned money from the specialist, the specialist to secure his just compensation must overcharge the patient who is thereby defrauded; the whole placing the physician and specialist in a compromising position calculated to bring reproach upon the profession. Furthermore, be it

*Resolved*, That the board recommends that both practitioner and specialist deal directly with the patient, each charging a fee proportional to services rendered and the ability of the patient to pay, in order that, uninfluenced by money consideration, the practitioner may choose specialists for their honesty and skill, and that specialists to secure business may not be induced to offer other than their integrity and ability.

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#### MORE FEE-SPLITTING AXIOMS.

1. Both physicians and specialists make a fee in harmony with the patient's ability to pay.

2. The patient should know the proposition of a joint fee which is received by the family physician and specialist.

3. The division of every joint fee should be understood by the patient.

4. The surgeon may operate for and receive his fee from the family physician.

5. The family physician should not expect a percentage of the surgeon's fee as a commission for favors bestowed.



6. The surgeon should not offer a percentage of his fee as a commission for favors received.

7. The fee received by surgeon, specialist or family physician must be for value received in services rendered to the patient by each.

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### THE FENGER MEMORIAL FUND.

The directors of the Fenger Memorial Association in Chicago are directing a letter to old friends, associates, students and internes, setting forth the purpose of this association, and making an appeal for contributions for establishing a suitable memorial in honor of the work done by Professor Fenger. The exact nature of this memorial has not been determined upon. Several suggestions have been under consideration, among which may be mentioned a research fund, scholarship, or some other means of establishing a proper working fund in some special scientific line. Those who knew Professor Fenger are directly acquainted with the admirable character of the man and his special scientific knowledge. To this class the committee does not feel it will be necessary to make a very strong appeal, as they are more than willing to contribute toward this fund. To the other and larger class who knew him by reputation and not through personal intercourse, the appeal is made for contributions. The following is the letter sent out by the association:

*My Dear Doctor:*—The directors of the Fenger Memorial Association respectfully call your attention to the enclosed circular of information, which sets forth the purpose of their work. Professor Fenger was a national and even an international figure in the development of modern surgery, but the physicians of Illinois and neighboring states are especially in debt to him, and we make this appeal to each of them to contribute something toward this Memorial Fund, to thus assist in the perpetuation of his memory. Many of his friends, confrères, pupils and students have already contributed liberally, but the fund is not yet large enough to be put into use in a manner to be as effectual as was first intended. A little more than \$7,000 has been collected. The directors hope to secure at least \$10,000 before they begin the work they have in mind.

Will you favor them with a contribution? If so, it will aid them in their work if you will forward your check to Dr. Ludvig Kektoen, treasurer, Rush Medical College, Chicago. Very truly,

COLEMAN G. BUFORD, Assistant Secretary.

Directors: Frank Billings, C. S. Bacon, A. Holmboe, Ludvig Kektoen and William E. Morris.

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### ABOUT OUR ADVERTISERS.

In this issue and in our February issue we have added a number of new advertisers. We again ask you, the readers of this journal, to read carefully the advertising pages. It will not only be worth your while, but it will help the business department of your JOURNAL. Very often the statement is made to us, in approaching prospective advertisers, that they will take space in THE JOURNAL for a few issues, and if any returns are evident they will be glad to continue. The advertiser does not care

to spend his money for advertising in any journal that does not pay. The success of a publication is directly dependent upon its business success, and its business success is dependent upon its circulation, and the quantity and quality of its advertisers, and the advertising is dependent upon the results which are obtained to the advertiser through the publicity of his business in the advertising pages. You will find something that you will need and want, and do not forget to mention, in writing to the advertiser, that you saw their advertisement in THE ILLINOIS MEDICAL JOURNAL.

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#### THE INSURANCE FEE—RESOLUTIONS BY THE CHAMPAIGN COUNTY SOCIETY.

WHEREAS, The Champaign County Medical Society, by a former resolution, has taken a position requiring all its members to exact a fee of five dollars (\$5.00) for insurance examination for all *so-called* old-line companies, and, in our endeavor to enforce such demands, we find that many assessment or fraternal insurance organizations require their examiners to do practically the same work for a small fee; therefore,

*Resolved*, That we deem it unjust to both the former companies and to ourselves to make such a wide discrimination in the fee for the same service, and that we recommend that, while we shall strictly adhere to a vote of five dollars (\$5.00) for all old-line insurance examinations, we also recommend that all *so-called* assessment or fraternal examination shall consist of a careful physical and chemical office examination with a certificate that the examined is in good health or not, as the case may be, and that a uniform charge of two dollars (\$2.00) for such examination shall be made and bill for such shall be rendered to the organization, and not to the person examined, and that a copy of this resolution be forwarded to all companies or societies doing business in the State of Illinois.

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#### WILDCAT LIFE INSURANCE COMPANIES.

An epidemic of new life insurance companies seems to be sweeping through the state in the past few months. Most of them have substantial financial backing. They are making flattering offers to medical men for assistance in securing agents and business, and, from what we can learn, many of our members are biting at the attractive bait, only to learn later that they have been defrauded of their time and money. In answer to an inquiry regarding the officers of one of these companies, one of our members, practicing where the home office is located, responded as follows: "I do not know anything about the medical director. He is a new man to me and this is the first time I ever heard his name. The secretary has the reputation of being more of a promoter than anything else. The company has not made much of a success at this point and has lost the investors some money. I have been ap-

proached by several of the physicians in the state for information concerning the company, as they have been examiners and had not received remuneration for the work done." Finally, brethren, be careful how you take up new insurance enterprises.

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### MEDICAL COMMISSIONS IN INSANE CASES.

Judge Lewis Rinaker, of the County Court of Cook County, has agreed to give a trial of the medical commission method of committing insane persons coming before his court. This enlightened decision calls for and will receive the endorsement of all persons who understand that insane persons are sick.

President William Busse and the Board of Commissioners of Cook County are willing to do all that lies in their power to provide at the great county hospital and at the detention hospital, in Chicago, facilities for the early, efficient observation and treatment of mental and nervous cases coming, or not coming, within the jurisdiction of the county court.

With this official willingness to do all reasonable things to aid the insane, it remains for the general public to put away its medieval superstition that insanity is a disgrace and to seek the aid of medical science and judicial enlightenment, in suspected or incipient cases of insanity, before the mental or nervous storm bursts and perhaps causes irreparable havoc.

As an earnest of President Busse's advanced position, a truly remarkable matter for a layman, let me quote from his annual message to the Cook County Board, delivered on December 7 last:

In the twenty years the Detention Hospital has been in service no changes have been made in the direction of enlarging its facilities. In the last few years the character of these institutions has changed. Experience in their management is supported by medical science in the demand that patients, before being sent to Detention Hospitals, shall be given prompt curative treatment. This would make it necessary to establish a psychopathic ward or wards in connection with the County Hospital. The treatment provided for in these wards would require the installation of the hydrotherapeutic apparatus which I recommended a year ago. It is my belief that through the treatment here suggested many insane patients might be prevented from becoming permanent charges of the state.

My recommendation last year that recreation grounds be provided, in which patients might take exercise and live outdoors, is about to be realized. An inclosure containing areas on each side of the building aggregating 8,000 square feet is about completed.

A trained-nurse service has been added to the interne work, with highly beneficial results.

As to the legal side of the question, the Constitution of Illinois provides that no person shall be deprived of "liberty or property, without due process of law." Insane persons often must be deprived of their liberty and of the management of their property. Some of them are dangerous to themselves and to others, not to mention their need of treatment. Hence court proceedings are necessary to commitment. The

Constitution further holds inviolate the right of trial by jury. Hence an insane person, on demand, if the law is obeyed, must be given a jury trial.

I shall try to elaborate herein, in non-technical language, the medical and the legal phases of the early handling of mental and nervous cases, as the education of the general public, and of many of our doctors, too, regarding insanity, is part of the Illinois State Board of Charities' program.

In insane cases there are three methods of commitment—the voluntary, where the patient realizes his need of treatment and care, so states to a county judge and is forthwith committed; the commitment by jury, when the jury finds a verdict and the judge commits; and the commitment by a commission of two physicians appointed by the court, where the commission recommends and the judge acts on such recommendation.

Judge Rinaker, at a conference in his office on February 13 last, proposed to try the medical commission commitment plan, rarely used in Chicago, provided the physicians present would submit to him a list of reputable and competent physicians, from which list he safely could make appointments as need arises. The physicians present agreed to do this.

In addition to county officials and representatives of the State Board of Charities, the following physicians were present: Dr. Hugh T. Patrick, Dr. Harold N. Moyer, Dr. Daniel R. Brower, Dr. Archibald Church and Dr. Sydney Kuh. There is not space in this article to go into details of the conference. I have stated the results.

The urgent necessity for the commission plan of commitment is apparent when one realizes that insane persons are sick. Is it not repugnant to all ideas of humanity, prudence and delicacy that a sick woman should be tried, in public, before a jury, five-sixths laymen, somewhat after the manner of the thief and the murderer, before she can avail herself of what frequently is the desperate necessity for quiet and medical treatment? Suppose she is a young mother and insane because of that. There are many such cases. If she is ill with some disease of the lung and not insane, there is no court proceeding required to get her forthwith into a hospital. In the larger cities she quickly has every facility known to medical and surgical science at her command, be she poor or rich. Suppose this illness is pneumonia. There is a delirium in pneumonia—a form of insanity. What is to be done? She surely is insane now. Suppose she has no lung trouble, but has typhoid fever. Typhoid has a delirium, too. Again, what is to be done? The thing that is done is to restrain this woman. She, often against her will, is deprived of her liberty and the management of her property without process of law. That is the only thing to do. But, if she becomes seriously ill in her brain, because of one of the mishaps of childbirth, or from other cause, she must needs be committed, in the absence of an intercurrent of a coexisting physical excuse, to a hospital for the insane by court procedure, before she can have needed care for her mental disorder.



Sometimes, if she is poor and lonely, her agitation and outbursts lead to a call for the police. Imagine her terror when she is taken out of her house by uniformed men and put into a wagon! She may spend a night in a station cell before she gets to the detention hospital and the court. Often her jail companions are murderers, thieves, abandoned women, rats and vermin. All this misery and harm because she comes into contact with officers of the law, kind of heart and meaning well, who do not understand how to care for her in her extremity. Such experiences are not usually the lot of the rich. They happen to the poor. The final horror is a public trial before a jury, after several days' delay in a poorly-equipped place of detention.

While recognizing the dignity and the necessity, in many insane cases, of a jury trial to deprive a person of his liberty and the management of his property, the law gives the alternatives in insane cases not of a criminal character, which I have cited in the foregoing. The medical commission plan, authorized in the Illinois Lunacy Act, is the needed substitute for the rigors of a jury trial. I think any one reading this paper will recognize that insanity is primarily a medical proposition. The legal decision of a case is based on a medical opinion whether the proceeding be by jury or commission. The reader may have a well-grounded fear that the commission might be corrupted by persons whose financial interest would be served by getting some one out of the way. But the judge appoints the commission. Certainly there are enough honorable men and able doctors to merit the confidence of the court.

As to methods of procedure, the public should appeal to medical science promptly in all cases of suspected, of known, insanity. They should seek the earliest possible treatment in a well-equipped hospital. They should abandon the ridiculous, unfounded belief that it is a disgrace to be insane or to have an insane relative. It is no more a disgrace to be insane than it is to have pneumonia or typhoid.

Doctors should realize the great value of early, scientific treatment of incipient and acute cases of insanity coming to their attention in practice. To repeat for emphasis, *the treatment should come before the storm breaks.*

For those patients who are not able to pay enough to secure treatment in private institutions, or who prefer state hospitals, doctors will find it advantageous to proceed as follows when a commitment is advisable:

1. If the patient is willing, have him apply to the County Judge for voluntary commitment under Section 37 of Chapter 85, Hurd's Revised Statutes. Under this law the patient may leave a hospital, to which he is so committed, at the expiration of three days after he shall have given notice to the superintendent.

2. If the patient is in a condition not to give consent and go voluntarily, ask the County Judge to submit the case to a commission of two physicians (See. 6, Chapter 85, Hurd's Revised Statutes) *whom he knows to be honorable and competent* and to commit the patient, if the commission so advises.

3. If there is doubt, as in borderline cases, and detention is necessary both for treatment and to reach a diagnosis, seek it under Section 2, Chapter 85,

Hurd's Revised Statutes. If you have not reached a diagnosis at the expiration of the legal ten days, specified in this section, ask the County Judge to continue the case pending further treatment and the determination of the diagnosis. If the diagnosis when determined is a form of insanity requiring treatment in a state hospital, seek commitment by a commission of physicians as in 2 above, if the patient will not ask for voluntary commitment.

All the foregoing procedures are lawful. It is a defensible custom, often used in large cities, to detain a suspected, a borderline, or an acute case of insanity in a hospital, without application to the county judge, just as is done with delirious cases of pneumonia and typhoid. As hinted in the foregoing, sometimes trivial intercurrent or coexisting diseases are used as excuses. I earnestly plead for such method whenever justified. But it always must be remembered that the patient has a right to demand, and to have, a jury trial, before he can be deprived, against his will, of his liberty or the management of his property.

In cases where there is suspected insanity and a commitment other than voluntary is necessary to prevent an impending storm burst, the law helps the physician by providing that (Section 1, Chapter 85, Hurd's Revised Statutes) any person who "*is in such condition of mind and body as to be a fit subject for care and treatment in a hospital or asylum for the insane*" may be deemed insane under the law. A presentation of such facts to a judge, or jury, if the commission plan for any reason is not used, might convince them of the wisdom of a commitment.

As a step to a more humane recognition of insanity as a physical disease, requiring the opinion and service of physicians, the State Board of Charities recommends to the Forty-sixth General Assembly, now sitting, that the so-called "Lunacy Act," Chapter 85, Hurd's Revised Statutes, be amended in Section 2 to permit the detention of "an alleged lunatic, for a reasonable time, not exceeding *thirty* days, pending a judicial investigation of his mental condition," instead of "*ten*" days, as the law now reads. A judge can help a physician, under the present law, by continuing the ten-day period from time to time. The great majority of perplexing cases can be diagnosed within thirty days. Many cases of acute insanity will clear, under proper treatment, in that period of time, permitting the patient to go home, restored without the shock and the humiliation and sometimes the positive injury of a court trial, when his only offense is that he is sick in his brain. If he were sick in his stomach or his liver or in any other organ or part of the body, except the brain or nervous system, a court would be the last place on earth to think of taking him.

Illinois county judges are responding nobly to the growing realization that insane persons are physically sick and that the judges need expert medical advice, such as rarely is available on a jury, in determining commitments where the intervention of a jury is not a legal necessity. An examination of 506 commitment papers taken at random from the files of the State Board of Charities, 1908, covering counties outside of Cook County, show that 345, or 68 1/5 per cent., of the cases were committed by the judge on the advice of commissions of physicians and 161, or 31 4/5 per cent., were committed by jury trials. So Illinois

counties, outside of Cook County, stand more than two to one, in the figures used, in favor of the humane and efficient medical commission method of handling insane cases. Judge Rinaker is now to give it a trial in Cook County. This section of the law (Section 6, Chapter 85, Hurd's Revised Statutes) never has been contested and brought to the consideration of the court of last resort in this state.

It is the earnest recommendation of the State Board of Charities that the county judges of the state who are not using the medical commission plan give that plan a careful trial in all cases where a jury is not demanded or there is not some other compelling reason for calling a jury. Physicians should urge such course upon county judges and explain in detail why. Physicians should explain the situation in homes where they are called to treat mental and nervous cases. Such a campaign of education, in many instances, will enthrone joy where sorrow reigned and will save money to the state and to many individuals.

Fifty-six per cent. of the wards of the state, meaning by the wards of the state the inmates of the twenty state charitable, penal and correctional institutions, are insane wards. Six per cent. more are feeble-minded wards. In other divisions of the service are many insane and feeble-minded struggling under the burden of other misfortunes. The cost to the state of creating and maintaining the eight institutions in the mental defectives group, since Illinois began the benevolent work, has been \$41,778,884.04, or nearly 70 per cent., of the total of \$59,823,008.05 spent for the seventeen state charitable institutions, not including the two prisons and the reformatory. This shows the economic necessity of preventing insanity when possible. But this article is written to set forth the medical and legal aspects of commitments of the insane, not economics, which is an allied matter of tremendous importance.

WILLIAM C. GRAVES.

Executive Officer Illinois State Board of Charities.

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## Editorial Note.

### THE MEDICAL SITUATION IN CHICAGO.

Under the above caption a Dr. E. P. S. Miller, of 954 West Lake Street, Chicago, contributes his views on medical practice in that city to the *Medical World* of Philadelphia. Dr. Miller is a graduate of the Harvey Medical College in 1905. We give his statement for what it is worth. This may be another case of going away from home to learn the news:

"I attended a meeting of thirty physicians of the West Side recently and found the speeches between the courses of the banquet very interesting. The medical situation in Chicago was summed up about as follows: Medical practice is not what it used to be. Chicago is a much healthier city since the drainage canal was opened. The Board of Health is making great strides in the prevention and stamping out of infectious

diseases. The doctors have too long been walking over one another for the privilege of doing work for nothing, and the Chicago committee on the abuse of medical charities finds a Herculean task on its hands to secure reform. The doctor protests that the laborer is worthy of his hire, but declares by his acts that *he* is not worthy of *his* hire.

"Medical services should be paid for by the patient if he is able; and if not, the city should pay for them; and the whole field of work done for nothing should be eliminated. It is at present a 'nervy' thing to start a practice of medicine in Chicago. The development of fads like Christian science (?) and other cults of healing is making considerable inroads upon the income of the regular practitioner, and the young physician here has a hard row to hoe. Every corner where two car lines cross blossoms out with signs, and in a couple of months or so the signs disappear, showing that their owners have waked up to the fact that the profession here is overcrowded, and with good men at that.

"The hospital question was freely discussed, one doctor saying that his experience with hospitals had been so unsatisfactory that he now keeps his patients at home as far as possible. The large hospitals received the principal share of criticism, owing to the tendency of the staff to 'syndicate' the business. Some hospitals (although the number is decreasing) do not allow the practitioner to attend ward patients who are not able to pay for a private room. The nurses and internes 'toady' to the staff and neglect the outsider's patient. Many a patient who thinks her doctor the best one in the country finds that he has only her in the hospital, while the staff doctor has a dozen or so, and the practitioner suffers by the contrast. The small hospital, in which things are more homelike and the doctor can maintain his usual relations to the patients, profits largely by the comparison.

"The regular practitioner has been too much of a distributor of cases, and has too often allowed himself to be 'specialized' out of his job. Study, common sense and backbone will enable the practitioner to perform many an operation he has formerly turned over to the specialist.

"A hopeful note was sounded by one of the physicians who felt that the practice of medicine in the future would be largely preventive medicine and that we would all find plenty to do in that line."

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## Correspondence.

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### ABUSE OF MEDICAL CHARITY.

CHICAGO, Feb. 20, 1909.

*To the Editor of the Illinois Medical Journal. Dear Doctor:*—Members of the Illinois State Medical Society outside of, as well as within, Chicago frequently complain of what seems to them unfair treatment of their patients by Chicago hospitals or hospital physicians. It may not be known to your readers outside the city that a far-reaching plan



of handling the abuse of medical charities in Chicago is now being formulated. The committee of the Chicago Medical Society having the matter in charge will present at the next meeting of the Council a plan for improving the whole administration of medical charities in Chicago, including that both in hospitals and in dispensaries. In order, however, to be thoroughly intelligent in the matter of attacking specifically the abuses in hospitals the committee is undertaking a comprehensive investigation concerning free treatment in Chicago hospitals. It is certain that physicians outside of Chicago can be of great service in this matter. The committee seeks specific instances in which the interests of physicians have apparently been unfairly interfered with by the free-treatment methods of Chicago hospitals. It is hoped that this notice will bring many such instances (if they have taken place) from physicians outside the city. Names, dates and facts should be carefully stated. The committee would also be glad to have its attention called to any free-treatment practice in Chicago that seems unfair, even if specific instances can not be cited. It is not intended that the names of either the physician making complaint or of the physician complained of shall be made public, but the committee must, before using any facts submitted, feel assured of their reliability, and that necessitates a signed statement. This is a matter of universal professional interest; *so please sit down at once and write your complaints*. They should be addressed to the undersigned.

DR. ELMER L. KENYON,

Secretary of the Committee on the Abuse of Medical Charities of the Chicago Medical Society, 34 Washington Street, Chicago.

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#### SOCIETY PROCEEDINGS PUBLISHED IN THE DAILY PRESS AND THE REASONS THEREFOR.

*To the Editor:*—About one-half of the physicians of our county—Wayne—are members of our county society. Not all the others are indifferent. Some tell their patrons and others that the society is a combine, a trust, to increase and collect their fees, but they will not unite with the society, preferring to stay with the people. We let the county papers publish what we see fit to give them, that the people may read what we do at our meetings. Some of our physicians like to have the people believe that they are too busy to fool with the society, and make the days of our meetings their busiest days. We hold quarterly meetings, and I shall hereafter endeavor to give you something instead of preparing for our local papers.

J. P. WALTERS, M.D.,

Secretary Wayne County Medical Society.

## Special Articles.

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### THE STORY OF ONE MEDICAL LIBRARY.\*

CARL E. BLACK, A.M., M.D.

JACKSONVILLE, ILL.

For the purpose of this paper, medical libraries will be divided into two classes. The first is the great collection of books, pamphlets and periodicals largely used by writers, teachers and those doing research work. The second is the small practical working library of the busy practitioner, which, whether it be individual or co-operative (as the society library), must devote special attention to current literature and to make itself most useful must have facilities for placing its material at the immediate disposal of its readers. This presentation is entirely devoted to the second class.

I wish to call your attention briefly to a work which has been carried on in a small medical library (library of the Morgan County Medical Society, Jacksonville, Ill.) for nearly three years. This work has been developed entirely from the standpoint of the needs of the busy practitioner.

The practical question which confronts all of us, and especially those who have become busy in the actual work of every-day practice, is how to find the necessary time to keep abreast of the times and apply the progress contained in the current journals to the needs of every-day practice. How do the new things in etiology, pathology, diagnosis and treatment get before the members of the profession? Medical progress begins with the experiments, observations and deductions of individuals. These, with their practical suggestions, are usually first presented to some medical society. They next appear in the transactions of such society and in the medical journals. Here they are discussed by the medical profession at large, and if they are worthy they live and shortly find their way into medical books. He who depends on medical books will always be a little behind the one who depends on the current medical literature. He may be safer from trying unproved theories, but will miss the initial inspiration of progress and will be delayed in accepting many a new method of diagnosis or plan of treatment.

One of the most pressing questions is how to make a great mass of journal literature coming to our desks available for daily use. The man in active practice can not read every article which he may need, and articles which may seem uninteresting and useless to-day may become a pressing need in a month or a year. Books and journals are the most important instruments in the armamentarium of any physician, either general practitioner or specialist. They are among the most important stones in the foundation upon which we build our structure of professional progress and future success. If this is true, and I do not

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\* Read before the American Library Association, June, 1908. Reprinted from "Public Libraries."

believe it can be successfully controverted, then the practical every-day question is, how can we get the most use out of our current medical literature? Anyone who frequently visits the offices of other physicians, as has long been my privilege to do, will be struck with two facts. The average physician subscribes for comparatively few medical journals, and those journals which are taken are scanned when received and then thrown in a corner or piled in a closet in the utmost disorder to be of no further use excepting for fire lighting. A few physicians put them on shelves in sightly bindings, but their substance is still far from accessible. This certainly is not as it should be. These journals contain all that there is of medical progress. When one writes a thesis or a treatise on a given subject he searches the current literature for the progress of that subject, and, therefore, when one wishes to apply to a case the most approved, modern and up-to-date treatment he should have some plan by which he can conveniently, expeditiously and thoroughly consult the most recent current medical literature.

It is an anomalous situation that medicine, one of the most progressive branches of knowledge, has no convenient classified and cumulative index to its current literature. The *Index Medicus* answers the needs of the research library, but is too cumbersome for the busy practitioner and lacks the cumulative feature. It is necessarily six to twelve months behind, for which period the number or volume index of the journals must be used. If one wishes to consult the literature of a given subject, say, for ten years, it would be necessary to consult the ten annual indexes and the 120 monthly numbers of the *Index Medicus* in order to secure the references desired. Such a plan is plainly impracticable for the busy practitioner.

I hope you will pardon a personal reference which seems necessary in order to explain the evolution of the plan I will describe.

In giving up general practice and devoting myself to surgery, consultations with other physicians greatly increased. These were not always surgical and made an increasing demand for some means of immediate reference to the most recent literature along various lines. Living in a city of about 20,000 inhabitants, I was dependent on my own library. My necessities in this regard were not different from those of hundreds of others and innumerable devices have been tried in order to keep in touch with the current medical literature which one has on his own shelves.

These considerations led me to undertake indexing such articles as I thought might be needed for future reference. Several plans were tried until finally, about twelve years ago, a copy of Dewey's decimal classification and relative index was obtained, which gave me an index and classification well adapted to needs of ready reference. I was subscribing for ten or twelve of the best journals and for nearly ten years I made a card index to all the original articles and clinical notes according to the Dewey classification, as I found by experience that it was impossible to select those I would require. As my time became more occu-

pied it was necessary to employ some one to do this work, and for the last two or three years it was done entirely by a trained nurse quite satisfactorily. As the index grew I was able to assist others who would call for references on given subjects.

Finally so many colleagues became interested that I proposed to give my card index, which had now accumulated about 75,000 references, if the society would employ a trained librarian and continue the work. It was decided to undertake to apply the plan for the whole profession of my community. Our local society had already, through the efforts of those interested in medical literature, accumulated 2,000 volumes of books, although most of them were old. Incidentally it may be said that a medical library is one of the most potent forces for maintaining the permanent stability of a medical society. Our collection of books and journals was real, tangible property, to which we now proposed to give an earning value. Our medical library already had a home in the public library building, and the librarian of the public library gave us invaluable assistance in carrying on and improving the work. We also had the good-will and support of the board of directors of the public library, of which I had been a member for a number of years.

Our society being in no position financially to undertake this work, we secured authority for members, who would subscribe a fund, to take charge of the improvement of the library. We had an attorney draw up a contract, explaining to him carefully that we wanted one on which we could base other contracts. The contract read as follows:

We, the undersigned, members of the Morgan County (Illinois) Medical Society, in consideration of the improved facilities to accrue to each of us upon the completion of the work hereafter mentioned, severally promise to pay to the librarian of said society, each month, for a period of 24 months from this date, the several amounts, by each of us set opposite our signatures below, for the purpose of having the library of said society properly catalogued, analyzed and built up; it being understood that we shall, through the said librarian, within the limits of the by-laws of said society, exercise exclusive control of the methods of doing said work, and of expending the fund hereby created, such control to be directed by the vote of a majority of said subscribers.

In December, 1905, the necessary \$1,800, or \$900 per year, having been pledged, the new work was begun on Jan. 1, 1906. A graduate librarian was employed for a two-year period. About two months of study and instruction were required to give her sufficient knowledge of medicine to enable her to begin the actual work, and during the first year it was necessary to carefully review every subject classified. We indexed and catalogued our medical books. We subscribed for twenty medical journals and the original articles and clinical notes in each of these was indexed. A telephone service was installed and members were urged to seek the library for references on any or all medical subjects. The growth of interest in this work was very satisfactory.

The plan consists of making a card index, both by author and by subject, of all original articles and clinical notes. At least two cards, subject and author, are made for each article, and many articles require two or more subject cards in order that important matters contained in them may not be overlooked. As soon as a journal is received at the



library it is immediately indexed and its subject cards filed under the proper class number and its author card filed alphabetically. We find it much more satisfactory to file the subject cards by classes than to file them alphabetically. This is especially true, as we have no standard medical subject list. As our index has increased in size it has been necessary for us to make an index to the classification. This index also answers the purpose of a subject list, if one wished to make an alphabetical index. That is, by combining our expansion of the Dewey classification and our index to the classification we have subject headings by which a uniform alphabetical list of medical subjects could be made. Our index to the classification contains nearly 14,000 subjects arranged alphabetically and preceded by the class number. By using the index the classification is made perfectly accessible to the physician whether he has any familiarity with the Dewey classification or not. The index also determines in advance for the librarian where a given subject is to be classified and this maintains uniformity. In order to increase the usefulness of the Dewey index for medicine, it has been necessary to make a number of important changes and to establish two form divisions, the first of which supplies all the changes to which body tissues are liable, and the second the causes, symptoms, pathology, diagnosis, treatment, etc., of diseases and body conditions.

The report at our last annual meeting, which completed the second year of the work, gives some idea of the interest which it has stimulated. During the second year 274 volumes of books, 103 pamphlets and 45 volumes of periodicals were added to the library by gift; 114 journals were circulated among the members and 94 reference lists were applied for and made by the librarian in charge of the thirty physicians living in our community. This takes no account of the members who visit the library daily to look up references for themselves or ask the librarian to look up a special article which they desire to read. This is a cooperative plan for indexing current medical literature, and it is gratifying to see the increasing use made of the library, especially by the younger men in our community. We do not intend that any doctor can justly say, "If I only knew where to find something on that subject." During the two years the forty-five members of the society spent over \$2,000 on their library. While the minority furnished the funds which made this work possible, it has been strongly impressed on the minds of all that the library and all its facilities exist for the convenience and use of every member, not only of the society, but of the medical profession in our community. The librarian of the public library has the privilege of using the library of the medical society for selected readers. We not only keep the material indexed from week to week, but we also keep a trained librarian at the service of the profession to furnish reference lists on any subject. A few months ago I was asked by the officers of my county society to present a paper on the "Opsonic Index." I telephoned to the librarian in charge of the medical library and in the next morning's mail received a list of eighteen entries, of which the following is a sample:

## LIBRARY OF THE MORGAN COUNTY MEDICAL SOCIETY.

OCTOBER, 1907.

BULLETIN.

No. 11

## MORGAN COUNTY MEDICAL SOCIETY.

MEETING OF OCT. 10, 1907.

Leader, Dr. Carl E. Black.

Subject, "The Opsonic Treatment."

"Opsonic Therapy in Skin Disease," R. W. McClintock.—Ill. Med. Jr., v. 13, p. 30, July, 1907.

Principles of Vaccine Therapy." A. E. Wright.—Jr. A. M. A., v. 49, p. 479, Aug. 10, and p. 567, Aug. 17, 1907.

"Studies of Opsonins," W. L. Moss.—Bul. Joh. Hop. Hos., v. 18, p. 337, June, 1907.

"Opsonic Therapy and Skin Diseases," H. R. Varny.—Jr. A. M. A., v. 49, p. 316, July 27, 1907.

This also illustrates the lists which are made and sent to our members every week. There is no thought that such lists shall embrace the complete literature, but they always give us the latest in our leading journals. This is just what the busy practitioner most needs.

We believe the library is for use and not simply a room of archives. The object of those subscribing the original fund was to make the library of benefit to the members of the profession in their daily work and thereby bring speedier, surer and more perfect relief to the sick and suffering. This is an age of rapid and radical advancement in medicine and it has been the purpose of this society to make the library aid each and every member to keep abreast of the times. We have tried to measure the success of the library by the practical use which is made of it from week to week. We believe that a library, a book or a periodical worn out by use is one which has completely served the object for which it existed. It is hardly necessary to say that we had little or no difficulty in securing the necessary funds to carry on the library and the indexing for the third year, which is now in progress. At this time it was necessary for us to change librarians, but, having our classification and index to the classification so well in hand, we found little difficulty in getting another trained librarian to take up the work for the third year. The library subscribes for twenty-seven of the leading periodicals as follows:

*Illinois Medical Journal.*  
*Journal of the Am. Med. Association.*  
*New York Medical Record.*  
*New York Medical Journal.*  
*Boston Medical and Surgical Journal.*  
*London Lancet.*  
*British Medical Journal.*  
*Edinburgh Medical Journal.*  
*American Jour. of the Med. Sciences.*  
*Archives of Internal Medicine.*  
*Johns Hopkins Bulletin.*  
*Therapeutic Gazette.*  
*Annals of Surgery.*  
*Surgery, Gynecology and Obstetrics.*

*Archives of Pediatrics.*  
*American Journal of Insanity.*  
*Journal of Ner. and Men. Diseases.*  
*Brain.*  
*Archives of Ophthalmology.*  
*Annals of Ophthalmology.*  
*Ophthalmic Record.*  
*American Record of Ophthalmology.*  
*Ophthalmology.*  
*Archives of Otology.*  
*Annals of Otology.*  
*Journal of Laryngology.*  
*Laryngoscope.*

We believe that this list contains a majority of the really valuable journals published in the English language. The original articles and clinical notes in each are indexed as soon as it arrives in the library. It will be seen that there is little in medical progress which will not be accessible to the members of our society for the asking. We adopted the following rules regarding the journals:

- (1) No journal shall be taken from the library until it is indexed.
- (2) During the first week after a journal is received it may be borrowed by any member of this society, but can not be kept longer than twenty-four hours.
- (3) After the journal has been in the library one week it can be borrowed by any member of this society and kept not to exceed seven days.

Rules two and three were adopted because many of our members discontinued their subscription to certain journals to which they only desire occasional access.

We make it the regular duty of the librarian to get the subjects for the various medical meetings as early as possible and send a copy of the list of references to the leader, whether he asks for it or not. She also posts a copy of the list in the library and other copies in conspicuous places in each of our hospitals. No member can plead ignorance of the subject.

The above plan in use in our library for nearly three years has worked so well that recently we have offered the facilities to the libraries of other medical societies and several have availed themselves of the offer. Most of the newer public libraries have graduate librarians in charge. Where this is true we have advised the medical society to secure a place for their library, as well as for their meetings, in the public library building, and have offered to furnish them a duplicate of our index for \$125 a year, or about \$10 a month. This is almost the same as the cost of the journals. In other words, we are able to furnish a copy of our card index to the twenty-seven journals for almost the same amount that the subscription for the journals cost. That is, any medical society can have the twenty-seven medical journals on their tables and we will furnish a card index to the original articles and clinical notes in those at a total cost of about \$250 per year. There is no reason why the list of journals should not be greatly increased. It is simply a matter of dollars and cents. We are also able to furnish a card index of any journal or journals on any given subject. The great advantage of such a plan over any other which is now accessible is that the index is always up to date and is cumulative. All there is on one subject is in one place and it gives just what is in our library and accessible to the reader for immediate use. If one wishes to undertake more extended research into the literature of a subject the index published by the American Medical Association, the *Index Medicus* and the index to the surgeon-general's library are at the command of the reader. Two years ago while in London I visited the *Medico Chirurgical* library and found that the librarian there was just beginning in a very small way a classification by subject of selected articles in current medical literature.

## THE PSYCHIC TREATMENT OF FUNCTIONAL NEUROSES.\*

JULIUS GRINKER, M.D.

CHICAGO.

Neurology is no more barren of therapeutic results. Among the many advances made, the psychic method of treating functional neuroses stands out conspicuously. The various cults had absolutely no share in the originating of psychotherapy. They merely utilized well-known principles while the majority of physicians were asleep. But, as in many other fields of activity, the economic side of the question is beginning to awaken the lethargic mass of practitioners who are now rubbing their eyes and asking, What is this psychic treatment? The answer is: It is nothing new; it is as old as mankind and has been practiced ever since there were any practitioners. We have always followed it and did not know it. While formerly we made extensive use of suggestion, we now aim to follow more rational methods. The older methods had a tendency to subject the patient's will to an extraneous force, such as suggestion, hypnotism or prayer. The new psychotherapy utilizes modern educational principles in order to strengthen the weak spots in the patient's mental make-up and aims to cast out the parasites of the mind and to permit healthy thought associations to be re-established. It teaches primarily self-reliance and scoffs at slavish subjection to another's will. The following is a concrete example of psychotherapeutic success: Mrs. C. D., aged 50, sustained an insignificant trauma to her right knee. Several days later she developed a typical case of traumatic hysteria. Her right knee was painful and stiff; the entire right leg then became paralyzed. Various diagnoses had been made and all kinds of treatments were administered. When she came under my observation she had been a confirmed invalid for a period of eight months, spending her time between the bed and an invalid chair. My diagnosis was traumatic hysteria, and the treatment purely psychical. In a few weeks from the beginning of treatment she was able to walk and attend to her household duties. She has now been well for over four and one-half years. For details of treatment the reader is referred to the original. In conclusion, I wish to emphasize that if the practitioner will devote a little more time to his patient's mentality, the ground will slip from under the feet of the "Christian Scientist," "New Thought," "Religious Psychologist," and the entire tribe of charlatan "healers." Their nefarious business of converting the race into a stupendous mass of cringing puppets at the shrine of Oriental superstition will then be at an end and we shall again have a race of reasoning people.

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\* Quarterly Bulletin of Northwestern University Medical School, December, 1908.



## COUNTY AND DISTRICT SOCIETIES

### ADAMS COUNTY.

The February meeting of the Adams County Medical Society was held on the 8th in the Elks' club rooms. Present: Dr. Henry Hart, president, and Drs. Robbins, Erierson, Grimes, Haxel, Werner, Williams, J. G. and W. W. Kidd, Gabriel, Ashton, Shawgo Kirk, Pfeiffer, Groves, Rice, Koch, Knox, Blickhan, Nichols, Bloomer, Reticker, Nickerson, Meyer, Mitchell, Bearman, Montgomery, Pendleton, Christie, Jr., Whitlock, Becker and Wells. Also Dr. F. E. Tull, a former active member of the society, who is now located at Albuquerque, N. M. The resignation of Dr. Joseph Fletcher of Mendon, was accepted with regret, and by motion he was elected an honorary member. Adjournment to Hotel Newcomb was had at noon for luncheon. In the afternoon Dr. C. W. Pfeiffer read a paper on "Aneurisms," and presented a most beautiful and interesting specimen of aortic aneurism. Dr. Koch presented a patient with aneurism for demonstration and examination at the hands of the members. Dr. Pfeiffer's paper was entertainingly discussed by Dr. Ericson, who gave a clinical report of several cases of aneurisms seen in his service at the Illinois Soldiers' Home. Drs. Robbins and Nickerson also reported cases. Dr. Christie spoke of the value of the Matas operation for the cure and relief of suitable cases of aneurisms. A case of Saliva Calculus of extraordinary size was reported by Dr. Pfeiffer and the specimen shown. Dr. R. J. Christie, Jr., read a paper on "Ectopic Pregnancy," and had specimens of tubal and ovarian conceptions to show. His case of ovarian pregnancy was especially interesting from its extreme rarity, there having been but nineteen other cases of the kind reported.

CLARENCE A. WELLS, Secretary.

### ALEXANDER COUNTY.

A special meeting of the Alexander County Medical Society was called at Cairo, Ill., by Dr. S. B. Cary, president, on Dec. 10, 1908. Non-members were also invited. The primary purpose of the meeting was to meet and enable all Alexander county physicians to meet Dr. J. W. Pettit of Ottawa, president of the State Medical Society, on the occasion of his visit to Cairo, and to listen to a discourse by him on "Medical Organization." The doctor's arrival was indeed at a most opportune time, as the Alexander County Medical Society had lapsed into a state of apathy, existed practically in name only, and its affairs in consequence were in a somewhat tangled condition. His able and efficient portrayal of the objects of organization; the accomplished good wrought by the American Medical Association and the State Society in legislative matters due solely to active, organized effort; the interdependency of the national, state and county societies upon their being active and energetic in their workings for the prompt and speedy achievement of their aims—for the public good as well as the undivided advancement of and broadening influences upon the members—had a revivifying effect upon the personnel of the society. This stimulus was further augmented by a talk made by Dr. Mitchell of Carbondale who accompanied Dr. Pettit, and who confined his remarks principally to the necessity of county organizations, and the benefits to be achieved by harmonious, persistent, actively applied organized energy.

At the conclusion of the address, the effect became immediately apparent, as spontaneous action was taken over the condition of the society. Wherein the society was remiss was at once remedied. Thirteen new applications were handed in and new enthusiasm created which portends to be unflagging for the success of the society.

Jan. 7, 1909, the society had an election of officers, resulting as follows: President, Dr. S. B. Cary; vice-president, Dr. A. A. Bondurant; secretary-treasurer, Dr. J. T. Walsh; delegate to state convention, Dr. J. J. Rendleman; censors, Drs. J. W. Dunn, Samuel Dodds and W. C. Clarke. After the election of officers, thirteen applicants were elected to membership. Dr. J. W. Dunn read a paper, "La Grippe and Its Eye, Ear and Throat Complications."\* This was freely and complimentarily discussed by Dr. A. A. Bondurant, with special reference to sinus complications. Dr. James M. McManus reported a case of pelvic abscess, which also was discussed by Drs. Dodds, Bondurant, Clarke and Walsh.

The society changed its meetings from once every third month to the last Thursday of each month.

At the next meeting of the society "Variola" will be discussed.

## COOK COUNTY.

### CHICAGO MEDICAL SOCIETY.

*Regular Meeting, held Dec. 16, 1908.*

A regular meeting was held Dec. 16, 1908, with the president, Dr. Alfred C. Cotton, in the chair. "An Analysis of Eleven Hundred Cases of Fractures of the Patella Treated by the Open Method," Dr. A. P. Heineck. Discussed by E. W. Andrews, Carl Beck, William Hessert, William Fuller, V. J. Baccus and C. C. Rogers. "Empyema of the Sphenoid," by Dr. A. H. Andrews. Discussed by Henry Gradle, V. J. Baccus and A. H. Andrews. "When Should the Operation be Performed for Strabismus and Squint Eyes in Children and on Adults?" by Dr. A. L. Derdiger. Discussed by W. F. Coleman. Adjourned.

#### DISCUSSION ON PAPER OF DR. HEINECK.

Dr. E. Wyllys Andrews:—Dr. Heineck covered all the important points in the operative treatment, but it will do no harm to emphasize a few of them by repetition. In the operation of suturing a fractured patella and ruptured ligaments, we have one of the most perfect pieces of surgical technic and at the same time a method which is only advisable in the best surroundings. The greatest antiseptic precautions are an absolute necessity. Often it is true that a good functional result follows non-operative treatment, but not uniformly. I am always disposed to agree with those who consider the lesion one of the joint, as a whole, rather than of the patella alone, hence our operative measures may be considered as securing the union of the ligaments primarily and the union of the fragments of the patella secondarily.

The patella is a sesamoid bone in the ligament which unites the quadriceps to the tibia. In flexion it is analogous to the olecranon process of the elbow joint. When the patella is fractured and the ligaments are torn, there is produced a V-shaped gap which must be closed up in each lateral ligament, and that can only be done by suturing the ligaments. The point Dr. Heineck made about the fringes which overlie the front and broken edges of the patella is an important one. These fringes absolutely prevent bony contact. Therefore, it is fallacious to attempt to bring these fragments together subcutaneously or by a non-operative method. The cure of a fractured patella by operation has consisted in the past of wiring together the fragments, but this method has been abandoned by many operators. The tear in the lateral ligaments is the thing to repair, by inserting a series of stitches beginning close to the border of the patella on each side. When these are drawn together the bony surfaces of the patella will be in perfect contact. In my own practice I have added the circular stitch around the bone, passing through the ligament above and the tendon below. The fringes which tend to hang down between the fractured ends are of

\* For text of paper see page 310.

great value to supplement the repair. I lay them over each other and suture them, overlapping by catgut stitches. This adds 50 per cent. to the strength of the repair.

Dr. Carl Beck:—The important question in fracture of the patella, as in all fractures, is to get apposition of the fractured ends. Union can not be perfect if the fractured ends are not in close apposition. These facts have been brought out by Hoffa and Trendelenburg, the latter particularly, who examined a number of cases, and found that in most of them the interposition of tissues between the fragments is the cause of non-union; therefore, he and all other surgeons advocate the open method of treatment. The open method is probably the method of choice of all surgeons to-day.

The old Volkmann method of puncture of the joint and removal of the hemarthrosis was practiced for a while. It is the method of choice in Germany in fresh cases, followed by massage and bandaging. In old cases the method described by Dr. Heineck is employed. A very valuable method is the one suggested by von Bergmann, used where the fragments are widely separated, consisting in the chiseling off of a part of the tibia with its ligament, bringing in apposition the two fragments and then replacing the bone which has been chiseled off after healing has occurred between the two parts of the patella. This method has not been used much so far.

Dr. William Hessert:—Is the patella essential to the functional integrity of the knee joint? Numerous cases of extirpation of the bone have been reported, and the functional result obtained is a good one, provided that the lateral extension of the quadriceps has been left intact. We see cases of extensive separation of the fragments in old fractures where the function of the joint is good. One old gentleman whom I saw recently with a separation of from four to six inches, can put his foot on a chair and raise up his body, the most severe test one can make.

Dr. Andrews struck the nail on the head when he said that these cases are not cases essentially of fracture of the patella, which is merely a sesamoid bone, but are cases of fracture of the patella with laceration of the lateral ligaments, the latter being the more important feature of the injury. It matters little what the injury to the patella is, but if the lateral extension of the aponeurosis is badly torn, function will be bad; if sutured by subcutaneous methods, the results will be bad. It is not a case of wiring the fragments together, but of treating the fascial laceration. This is the important part of the whole thing, and if that is sutured, it matters little how the patella is treated, whether wired or stitched circumferentially.

Subcutaneous operations are absolutely to be condemned and ought not to be performed at the present time. They are only of historical value.

As to indications for operation, it is a question whether the mere fact of fracture of the patella is an indication. Fracture of the patella with little if any separation of fragments would indicate that the lateral ligaments and capsule are injured but little, and you will probably get bony union or strong fibrous union with the closed method of treatment. If the fragments are separated to any extent, an operation is the proper thing to do.

Is there any way of determining before operation whether the extensor apparatus has been lacerated extensively? It has been suggested to put the patient on the table, and if he can raise the leg there is not much lateral laceration, and *vice versa*. I have never seen a patient who could do that and I have always found an extensive laceration laterally. This may or may not be of some value as a clinical test.

I do not believe that Dr. Heineck emphasized the limitations of an operation. It should not go out that all fractures of the patella should be operated. They should be operated only under certain conditions, and only by men who are competent and who have access to a modern hospital. No one is justified in attempt-

ing an operation under other conditions than these, where there is such possibility of an ankylosis or suppuration or loss of life. It is unsafe to advise that the operation should be done by every occasional operator.

As regards statistics: I think that not nearly all the failures are reported that should be. We have all seen cases of infection, but they do not find their way into the literature, as a rule. For this reason statistics are not of much value.

Dr. William Fuller:—It occurred to me that in the discussion of the subject presented by Dr. Heineck this evening, some means of bringing to our notice for a moment the anatomy of the patella would serve a useful purpose; and with this idea in view, I requested Dr. White to furnish us with a specimen showing the anatomy of the knee joint. We are, therefore, able to briefly review the anatomy of this joint by the specimen which will be passed around, and thereby the better appreciate the points brought out regarding the operative treatment in fractures of the patella.

The patella is seen to occupy a position in front of the knee joint, having attached loosely to its posterior surface synovial membrane. In front, the patella is covered by a somewhat loosely attached fibro-periosteal covering and which, with the capsule behind, forms at the periphery of the patella, a very firm attachment to this bone. Thus we see that the patella is embedded in a dense fibrous sheath, to which the attachment is strong at the circumference only. This intimate relation at this point will explain, in all transverse fractures of the patella, especially where there is separation of the fragments of bone, why the knee joint is usually opened.

The deficient blood supply of the patella is another anatomical feature not often referred to. It is not difficult to understand how an injury may deprive it still more, till the non-union in many of the patellar fractures could rationally be attributed to this fact. In fact, this is the explanation offered by many surgeons in the failure of bony union in many fractures regardless of the treatment used.

I believe the lesion in the bone is the minor part of the real damage done in the condition described under the heading fractures of the patella. The fracture *per se* is of small moment, as shown by cases which recover with good functional results, while the bone fragments remain widely separated, and also by the cases which show functionally good results after complete excision of the patella. Close study of cases in which the ligaments and aponeurosis about the joint are torn without fracture of the knee cap will amply demonstrate the true significance of a fracture of the patella. Such a case, through the courtesy of Dr. Channing Barrett, recently came to my notice. In this case a man of 60 years sustained an injury which ruptured the extensor femoris tendon about one inch above the patella. The nature of this injury passed unnoticed till discovered by Dr. Barrett some weeks after the accident. The patella had not been fractured, but there was a wide separation of the ends of the extensor tendon of the thigh; the disability in this case was exactly that which is often seen in the condition described as fractures of the patella. Argument is scarcely needed to convince one that the disability following the treatment of the condition under discussion, is due, not to failure in bony union of the patella, but to failure in recognizing and properly repairing the torn ligaments and aponeurotic structures, as so well brought out by Dr. Andrews. The bony repair here is as elsewhere, or in many other bones, not essential to good functional results. In the treatment of all fractures, it is my belief that functionally good results are, as a rule, possible; while in the treatment of most fractures I believe that anatomically perfect or even good results are not, as a rule, possible; nor is this result really necessary or called for, as has been repeatedly shown in the treatment of fractures generally.

I believe in the open operative method of treatment in fractures of the patella when this treatment can be carried out by surgeons of acknowledged skill, and with a faultless technic, but under no other circumstances. Cases do recover



with fairly good and useful extremities, when intelligently treated on the expectant plan, which should be the method of choice for the occasional operator and the general practitioner.

In the open method of treating fractures of the patella the joint can be emptied of blood and synovial fluid; the shreds and tags occasioned by the zigzag tears frequently seen in the overlying fibro-periosteal covering can be removed from the joint; the tilted pieces of patella can be readjusted, and what is most important of all, the suturing of all lacerated soft structures can be done with certainty and accuracy.

The perfect safety of this operation has been demonstrated not only by hundreds of recent operations on this and other joints, but was long ago shown by Lister, who, owing to the high mortality following operations on the knee joint in pre-antiseptic days, made use of this particular operation of wiring the broken patella to further demonstrate the utility and reliability of antiseptic methods of operative surgical work.

Dr. Victor J. Baccus:—Dr. Heineck should be complimented, for he has exposed the subject thoroughly and systematically. My experience with fracture of the patella is limited to four cases of transverse fracture of the patella, which were treated by the operative method, and two cases which were treated with the non-operative method. Of the latter, one was transverse and the other was a fracture transverse, and the lower half of the patella was split in two, thus forming two additional fragments.

The indication for the operative treatment in our four cases by the open method were the wide separation of the fragments and the inability to replace and retain the fragments in good apposition. Intraspinal or lumbar anesthesia is dangerous, hence it should be avoided. Sonnenberg had two fatal cases in 900 intraspinal anesthetics. If the general anesthesia is contraindicated, we may choose the deep local infiltration method of Schleich. This is carried out by infiltrating a transverse zone four inches above the knee joint. Then a superficial skin infiltration at the site of the incision selected. In this manner the operation can be performed practically without pain.

What I wish to particularly mention is when to operate, either as soon as possible following the accident, or at the termination of the first forty-eight hours. Contrary to the general opinion expressed by many surgeons, the four cases operated by us we operated within two hours of the accident. We have no cause for regret operating early, for the patients made good recoveries, with bony union of the patella and perfect function of the joint. I can not explain satisfactorily to my mind why we should wait. (a) Without interfering, the bleeding from the bone fragments and soft tissue is arrested only by the pressure of the blood and synovial fluid accumulating in the joint. (b) By Nature's own resources of coagulation and thrombosis occurring in the divided ends of the bleeding vessels.

The resorption of these contents loads the lymphatics of the joint, synovial membrane and periarticular tissues; thus even at the end of the first forty-eight hours the soft tissue would still be edematous. The anterior soft structures of the joints are mostly fascial in nature and easily distinguished; hence it is not necessary to wait forty-eight hours before operating. Some operate at once. The suturing of the fragments and of the soft tissue arrests the bleeding at once and places the structures in a favorable position to begin tissue repair.

*Operative Technic.*—The semilunar incision with convexity downward is best, for it gives room and places the scar outside of the line of the bony fracture. In one of our cases, as Macewen and Morris have reported, we found the base of the prepatellar bursa interposed between the bony fragments, and no method but the open method could have brought those fragments in close apposition. The contents of the joints are preferably removed by light and gentle sponging. The suture of the fragments should be done by the encircling method of Paul Berger, whenever possible, for this method does not require the drilling of the

bone fragments. The aponeurosis of the extensor quadriceps tendon should be sutured with eversion of the edges, thus assuring us to not dip in between the fragments. In our cases we used a small drain placed laterally at both ends of the incision. The suturing material should be wire, for it possesses decided advantages. It forms a solid suturing material, is aseptic, and it can be removed under local anesthesia, if necessary. The skin may be closed with any suturing material. A light plaster cast should be applied and removed at the end of the first week, and perform massage of the quadriceps extensor muscle. A second cast is applied, extending from the ankle to the junction of the middle and upper third of the thigh. With such a cast the patient can get up, walk on his foot, and get about as early as the twelfth day. The cast finally removed at the end of the fourth week.

Dr. Cassius C. Rogers:—There is only one point to which I wish to refer, and that is the time of ossification of the patella, which occurs some time between the third and seventh year, so that when the child first begins to get around by creeping and then begins to walk, the patella is not yet ossified.

I wish to present in this connection a patient who fractured his patella in 1905. The fracture was treated by the non-operative methods. Eleven months afterward the ligamentous union ruptured and the patella was broken again. This time the fracture was treated by placing a wire around the patella, the wire breaking and the fragments separating. A third fracture occurred twenty-five months after the original injury. I then was called and recommended removal of the patella, to which the patient consented. I made a long incision just internal to the quadriceps tendon, and sutured the quadriceps extensor to the ligamentum patella by turning down the anterior one-half of the quadriceps extensor tendon. A year has elapsed since the operation, and the patient has perfect use of his knee joint; in fact, he does not even limp.

Another patient had a comminuted fracture. The leg and thigh were immobilized by means of a cast for three months, when it was found there was an ankylosis of the joint, without separation of the patellar fragments. I resected the patella and the patient has a useful joint, with perfect extension and flexion.

I would not recommend resection of the patella for fracture, except as a last resort in comminuted ununited fractures, where other methods of treatment have failed. Otherwise it is bad practice to remove the patella, because we get splendid results by bringing the fragments together.

#### DISCUSSION ON DR. ANDREWS' PAPER.

Dr. Henry Gradle:—Dr. Andrews has stated in a concise and clear manner the views generally accepted by the relatively few surgeons who have studied disease of the sphenoid. In all probability the sphenoid is the least frequently involved of all the nasal accessory sinuses. The symptomatology of the involvement is obscure. We do not know very much about acute cases; they seem to be characterized by headache and a feeling of fulness. Whether they generally heal without surgical interference can not be stated, but appropriate treatment, such as cleansing douches, and the free application of adrenalin leads to disappearance of all symptoms in many cases of suspected acute infection of the sphenoid sinus.

From personal experience I can recommend the usefulness of Dr. Andrews' probe and canula. It is very difficult to enter the sinus without removing the middle turbinal, except in persistent chronic cases where atrophy of this bone has taken place, or where there is an uncommonly large meatus. The least bulging of the septum of the nose toward the side to be explored renders examination exceedingly difficult.

Among the symptoms of chronic sphenoid sinus suppuration are headaches of the migraine type. I have known several instances where such headaches were dependent on sphenoid sinus suppuration and disappeared when that condition was relieved. The sphenoid sinus has of late years been of more importance in the estimation of rhinologists on account of danger to the optic nerve

following extension of sphenoid suppuration. Quite a number of cases are on record showing that sphenoid disease may extend upward and involve the optic nerve in neuritis and later in irrevocable atrophy.

Dr. V. J. Baccus:—I had occasion while demonstrating in operative surgery to investigate some of the sinuses, and it is easy to understand that the rule for finding the length of the sinus, as shown by Dr. Andrews, is correct. I have had occasion to see Dr. Freer do deviated septum operations where the septum was pressed against the middle turbinated body, and one could not have entered the sphenoid sinus on that side. Surgery of these cavities has been much advanced, particularly by the rhinologist, but also by the general surgeon.

Dr. A. H. Andrews (closing the discussion):—It is difficult in some cases, and in many cases impossible, to enter the sphenoid cavity without removing the middle turbinal. In cases of normal septums, it is usually much easier than is ordinarily supposed, and almost anyone can explore the sinus, especially after having tried it on the cadaver. I had some cases to report, but they are all alike as to symptoms, much the same exploration of the cavity, finding it diseased, draining it, relief of symptoms, stoppage of discharge and symptomatic cure.

I went to the country to do a mastoid operation for a discharging ear with brain symptoms. The patient died, and I did an autopsy at the request of the family and the local physician. There was no mastoid disease, but disease of the sphenoid which caused the meningitis. Many cases of meningitis and disease of the cavernous sinus are due to sphenoid disease or disease of the other accessory cavities of the nose.

#### DISCUSSION ON DR. DERDIGER'S PAPER.\*

Dr. W. F. Coleman:—Most cases of strabismus are monocular and few are alternating. The question of greatest interest in this connection is how do these persons see? The popular belief is that with the fixed eye they see one thing, and with the deviating eye they see another. One image of an object is eccentric and the other is not. They really see only one object. Refraction is usually far-sighted and the eyes are undeveloped. Ninety per cent. of patients who squint are far-sighted, which is also true of those who do not squint; therefore, this is not the only etiological factor, though an important one, and that was not emphasized in the paper as it should be. Worth of London studied this question more than any other man, and his theory is that the fundamental determining factor is a fault of the diffusion faculty, which is not fully developed until the sixth year of age, and 75 per cent. of these cases squint before the end of the fourth year. Hyperopia and amblyopia increase the tendency to squint.

As to treatment: Increase the vision first of the squinting eye and correct the hyperopia by putting on glasses. I would not hesitate to put glasses on any child, no matter how young. Worth put them on a fourteen weeks' old child; by obscuring one eye; by atropin in the fixing eye; by electricity, and you may double vision in one month. Cultivate the fusion power by means of Worth's amblyoscope. If you can not get simultaneous vision, you might as well give it up. Use the amblyoscope for fifteen minutes once or twice a week. If you can get fusion, you can cure that patient, and you can do it in 30 per cent. of the cases. In another 30 per cent. you will get relief, so as not to have more than five degrees of convergence.

As to operation, I operated on both interni of a child six months old, and got good results, both as to the appearance of the eyes and the nervous condition. What operation will you do? What is the objection to tenotomy? You can not tell the immediate effect or what will happen later. I have seen divergent strabismus follow tenotomy of the internal rectus done by the best operators. It is not the thing to do. I have never yet had an eye that did not remain

\* For text of paper see page 284.

where I placed it by advancement. It is unphysiologic to cut a strong muscle in order to strengthen a weak opponent.

Dr. Derdiger (closing the discussion):—I wish to thank Dr. Coleman for his kindly criticism, but fear that his remarks may be misconstrued when he says he operated on a six months' old child for strabismus. That was doubtless a case of congenital strabismus. During my visit to the meeting of the A. M. A. at Atlantic City and Philadelphia Clinics in 1907, Posey reported 17,000 cases; 53 were of a congenital type and 309 were alternating, or concomitant, squint. I stated that non-surgical treatment should be resorted to before an operation is performed. I operated on the lady who is before you this evening, doing an advancement operation two years ago, and the results are beautiful, and the vision is exceptionally good. In the amblyopic eye she now has nearly normal vision. But, that is not the reason why we should say to operate as early as possible. I believe in conservative methods, trying every known form of treatment before resorting to operation. I am referring to the concomitant convergent squint in children up to the age of ten years.

*Regular Meeting, held Dec. 23, 1908.*

A regular meeting was held December 23, 1908, with the president, Alfred C. Cotton, in the chair. George E. Shambaugh gave an illustrated talk on "The Causes of Labyrinthine Vertigo and the Methods of Examining the Semicircular Canals in Diagnosing Diseases of the Labyrinth and of the Cerebellum." His remarks were discussed by J. Holinger, Harry Kahn and G. W. Hall. E. C. Rose now followed with a paper entitled "Phagocytic Immunity and the Therapeutic Injection of Dead Bacteria in Pneumococcus and Staphylococcus Endocarditis."\* The paper was discussed by James B. Herrick, Wm. J. Butler, Allen B. Kanavel, and the discussion closed by the author.

Adjourned.

DISCUSSION ON THE PAPER OF DR. SHAMBAUGH.

Dr. J. Holinger: There are many arguments favoring the assertion that the function of the semicircular canals can not be to determine the direction whence a sound comes. The strongest argument is that in an open space without walls around us we can not distinguish the direction whence sound comes. In some instances to determine whence a sound comes is of the utmost importance, in that life and death may depend on it. For instance, the lookout on a boat in the ocean in the middle of the night may hear the bell-buoy ringing, the lives of the whole crew and passengers may depend on the accurate determination of the direction whence the sound comes. Three or four men may try to determine the direction of the sound, one of whom will say that the sound comes directly from in front or from the rear, another from the other side. As long as there is no deflection of sound it is exceedingly difficult, if not impossible, to determine the direction of the sound. Therefore the semicircular canals can not serve this purpose. A further remark concerns vertigo, which is a very frequent condition. It can be produced by diseases of the external ear, middle-ear or labyrinth, e. g., a piece of wax in the ear; by affection of the Eustachian tube and also by diseases of the acoustic nerve and cerebellum. As to the invasion of the semicircular canals and vestibulum by inflammatory processes, Dr. Shambaugh has presented the subject of its diagnosis from a purely scientific standpoint, but, from a practical standpoint, I can assure you that these occurrences are not as rare as was formerly our general impression. It was the general belief that the invasion of the labyrinth by a suppurative process would at once lead to meningitis and death. This is not the case. Our knowledge on both these points dates only from the time since we learned to analyze the function of the labyrinth. As to the first point, the comparative frequency, last spring I had an opportunity to make a diagnosis in two cases of acute infection of the labyrinth. Both patients got well.

\* For text of paper see page 263.



By means of the tuning fork tests we are able to analyze the function of the cochlea, while by means of the tests Dr. Shambaugh spoke so ably of to-night we are in a position to analyze the function of the vestibulum and semicircular canals. These tests combined gave us the means to solve another question, namely, whether there is such a thing as an acute serous labyrinthitis which may heal without loss of function of the organ. This question was answered in the affirmative.

Dr. Harry Kahn:—The essayist has demonstrated the complicated anatomy of the internal ear quite lucidly and has also made plain the physiology of this organ; for this he is to be greatly complimented. However, regarding the diagnosis of cerebellar abscess of otitic origin, it is not so simple as he would have you think. According to the Vienna statistics, about 1 per cent. of cerebellar abscesses run a latent course, and out of 153 authentic cases reported by Neumann, there were 22 per cent. of these that could not be diagnosed on account of complicating meningeal symptoms, and in 11 per cent. of these 153 cases no pus could be discovered at operation. Therefore, if we take the 10 per cent. that run a latent course, and the 22 per cent. that were undiagnosed or unsubstantiated as cerebellar abscesses, it gives us about one-third of the cases in which no definite diagnosis can be made. According to Neumann, even after a diagnosis has been made and operation performed, it is only by chance many times that a cerebellar abscess is discovered. It is, therefore, not an easy matter to make a diagnosis in these cases. The nystagmus is but one of the symptoms; there are many others to be considered, as, for instance, the general symptoms of tumor of the brain, meningeal symptoms, the systemic manifestations, etc.

The differential diagnosis between circumscribed disease of the semicircular canals and abscess in the cerebellum can not be made until the labyrinth has been removed, and then only can the diagnosis of cerebellar abscess be made if the patient still has nystagmus and other cerebellar symptoms remaining.

Dr. George W. Hall:—In regard to nystagmus and dizziness being produced by this condition to which Dr. Shambaugh has alluded, I take it that he does not pretend to make a positive diagnosis of cerebellar abscess, in the absence of internal ear disease, on those two symptoms alone. His idea is, that other symptoms are necessary in order to make a positive diagnosis of involvement of the cerebellum. I think if he were to attempt to make a diagnosis on those two symptoms alone, he would go astray in the great majority of cases, because there are a great many things which might produce similar conditions. We may have all the symptoms of cerebellar disease, with tumors located in other portions of the brain. Frontal tumors, for instance, may produce similar conditions by pressure.

#### DISCUSSION ON THE PAPER OF DR. ROSENOW.

Dr. James B. Herrick:—We ought not to let work of this kind pass without a word of praise. Dr. Rosenow is to be commended not only for the high grade of his work, but for the persistence with which he has kept up his study of the pneumococcus, so that now he is an expert in this line. While this is essentially laboratory work, it is to be commended because it is being brought into close relationship with patients; it is definitely clinical laboratory work. The results he has obtained are encouraging. While but few conclusions are warranted as yet, still he has determined certain facts that are to stand for all time. If he will persist, some practical good will surely come out of his investigations.

A word concerning the practice of making blood cultures. At the Presbyterian Hospital, where a large part of the clinical material has been found by Dr. Rosenow, we have been making systematic examinations of the blood for bacteria in all suspected or known cases of typhoid, pneumonia, malignant endocarditis; in fact in all infections. This has been done for about seven years. It has been said by some that these bacteriological examinations of the blood are dangerous to the patients. I think I am not mistaken when I say that of several thousand bacteriological examinations of the blood, made by various physicians in the Pres-

byterian Hospital, in the last seven years, the blood having been withdrawn from a vein in the arm, and in other thousands of examinations made at the Memorial Institute, not a single instance of an accident to an artery or nerve has occurred—certainly, no serious accident. The only thing in the shape of an accident has been occasionally a slight subcutaneous hemorrhage or traumatic hematoma. This insignificant operation is not really as dangerous as the hypodermic injection. There one is injecting something, and it is not always sterile. The asepsis that is practiced in bacteriological examinations of the blood practically eliminates the danger of infection, and it is to be remembered that nothing is injected, but rather something is withdrawn. The danger is practically *nil*.

This work ought to be continued for another reason. If the time ever comes when laboratory men or clinicians present to us a specific for these infectious diseases, as, for instance, malignant endocarditis, then we must know what organism is at fault. It will not do for us to say that a given case is one of malignant endocarditis, but we must be able to say whether it is a streptococcus, pneumococcus or staphylococcus endocarditis, as the case may be. We can not treat a case of streptococcus infection in the same way that we treat a case of infection by the gonococcus if there is a specific remedy on hand. That leads me to say that in our bacteriological work better and better results are being obtained as the technic is being perfected, and the men who are working with one particular organism, as, for instance, Dr. Rosenow with the pneumococcus, are able to get pneumococci out of the blood more frequently than those who are not so expert in this work. Dr. Irons, who has worked with the gonococcus, has succeeded four or five times in getting the gonococcus out of the blood in cases of gonococcus sepsis and of malignant endocarditis.

There is one other point I would briefly dwell on. A bacteriological study of the blood will help in enabling us to understand better the clinical picture of these cases of endocarditis. The cases of endocarditis due to the pneumococcus and those that are due to the staphylococcus or streptococcus do not present one and the same clinical picture. At present we are not able to draw a line of distinction between these various classes of endocarditis. We can not say, for instance, that the peculiar course of the temperature, the behavior of the pulse, the occurrence of petechiae, etc., are positive indications of infection by one particular organism, and yet, even now, there are certain symptoms which point suspiciously toward infection with particular organisms. It has been shown, for instance, by many observers, that the course of the disease in staphylococcus endocarditis is more apt to be malignant, fulminant or pyemic in type in its chills and temperature, and that its metastatic or embolic foci are more apt to be accompanied by suppuration. If we can tell in every case of endocarditis of the malignant type what organism is at fault, ultimately we may be able to draw a clinical picture of the various forms of endocarditis, and to differentiate between them largely on the basis of the clinical symptoms.

I want to emphasize the fact of the existence of these chronic cases of ulcerative or malignant endocarditis that have been mentioned by Dr. Rosenow—the cases that last for weeks and months, or even for from one to two years. These cases are sometimes very puzzling, but are more common than is generally recognized.

Dr. William J. Butler:—The comments of Dr. Rosenow, concerning the properties of the pneumococcus, isolated from his cases of endocarditis, by virtue of which he explains their uniform localization on the valves of the left side of the heart, are interesting. We know, however, that certain bacteria, as the meningococcus, etc., show a predilection for certain tissues.

His excellent experiments with the pneumococcus have been especially interesting to me, as the many anomalies and apparent inconsistencies when the theory of opsonins is held in view, are rendered far less perplexing, and in fact are greatly clarified through a knowledge of Bial and his pupils.

After some unsatisfactory results in his inquiry into the causes of the resistance of the chicken toward, and the susceptibility of the rabbit to, anthrax

infection, he abandoned the humoral theory of immunity. As the result of subsequent investigation, he established the aggression theory, the chief points of which are as follows: Pathogenic are distinguished from non-pathogenic bacteria in that they have the power to live in the organism. The destruction of the non-pathogenic bacteria proves that the body has protective powers against bacterial invasion. These protective forces rest in the phagocytes. The pathogenic bacteria resist phagocytosis. This latter is effected either by excretion of certain substances, or by changes brought about in their environment. These substances are named aggressins; aggressin determines the aggressiveness or virulence of the bacterium in that it paralyzes the phagocytic immunity and thus permits of the unhindered growth of the bacterium. This property may be demonstrated by freeing an aggressin containing an exudate from bacteria by filtration and injecting an animal with this fluid and a less than fatal dose of the corresponding bacterium, when it will be found that a fatal disease will be produced.

While aggressin is the cause of infection, it is also the cause of immunity.

If an animal is injected with an aggressin containing exudate that has been freed of bacteria, he becomes immunized against the bacterium that gave rise to the production of aggressin by the formation of an antibody named antiaggressin. The serum of this animal has the power, when injected into another animal, of communicating a passive immunity.

Hoke's experiments with the pneumococcus proved it to be an exquisite aggressive bacterium.

Dr. Allen B. Kanavel:—I would like to ask Dr. Rosenow if any experiments have been made in transfusing blood from one animal to another, and if so, what effect it has on phagocytosis in this particular condition? It seems to me, in slow chronic infections of this nature something of that kind might be of interest experimentally.

Dr. Rosenow (closing the discussion):—In answer to Dr. Kanavel, I will say that experimentally there is no good evidence to believe that the transfusion of normal blood from one animal to the other would do much good, for the reasons I have given, and which I do not care to discuss at this time.

With reference to the remarks made by Dr. Butler, I am well aware of the theory that has been advanced by Bail and am familiar with the work that has been done in connection with aggressins. There is a fundamental difference between Bail's theory of aggressin and the results we get here. No one has yet been able to show that virulent pneumococci protect themselves against phagocytosis by the excretion of an anti-phagocytic substance. Bail assumes this to be the case. The only way I can get an anti-phagocytic substance, a substance which Dr. Hektoen has named "virulin," is by getting it from within the bacteria themselves. It is not a process of excretion; it is a substance which we can extract under certain conditions. In this process of extraction the bacteria themselves are broken up.

One word with regard to the harmlessness of blood cultures. There is no more danger attending the making of a blood culture, as Dr. Herrick has just pointed out, than that which attends the use of a hypodermic. The withdrawal of blood from patients often helps us in making a proper diagnosis. I have made blood cultures when patients were in the best as well as in the worst possible condition. No untoward symptoms followed the puncture in a case of thrombosis of the subclavian and innominate veins, a condition most favorable for thrombosis. There is one requisite, however, which should be remembered, and that is the use of a needle with a sharp point. If you attempt to puncture the vein wall with a dull point, it rolls away, while a sharp point will catch the wall and go through without difficulty. As an illustration of the harmlessness of this procedure, I might say that the median basilic vein of my left arm has been punctured about a hundred and fifty times in the last six years, and sometimes every day, for three weeks at a time, without any ill effects.

*Regular Meeting, held Dec. 30, 1908.*

A regular meeting of the Chicago Medical Society was held on Wednesday evening, Dec. 30, 1908, at 8:30 o'clock, in the Assembly Hall of the Northwestern University Building, Chicago. Dr. Alfred C. Cotton, the president, occupied the chair.

### SITUS VISCERUM INVERSUS, WITH PRESENTATION OF CASE.

FREDERICK TICE, M.D., CHICAGO.

The author, in presenting this case, said: This patient, is presented for two reasons:

First.—Because of the comparative rarity of the condition. In speaking to a considerable number of the members of this society, those with an extensive clinical experience, all but a limited few have been free to admit that they have



Right.

Left.

never encountered this condition. Those few who have observed the condition did so, principally, as an accidental finding at the postmortem. The text-books on pathology and medicine, with two or three exceptions, are strikingly silent. The current medical literature contains only a few reports, scattered over a considerable period and many of these are from postmortem records.

Second.—Because of its clinical interest from the standpoint of clinical recognition and particularly the possible erroneous clinical conclusions. As this meeting is a clinical one it is not necessary or is it desirable to consider the vague and questionable etiological factors. It is sufficient to say that the condition is designated as situs viscerum inversus, situs inversus, situs transversus, or transposition of the organs. Dextrocardia, when congenital, the heart and in some instances also the great vessels being transposed, is a comparatively more frequent condition. Ziegler and other pathologists classify such cases under the section of malformations and in the sub-group of monstrosities by perversion.



*Presentation of Case.*—(a) Clinical History: W. C., male child, eight years old. Has always been well, until about two months ago, when he complained of headache, slight chills, nose bleed and loss of appetite, and his mother thought he had a fever. After a few days, as his condition did not improve, he was placed in bed and was first seen at this time. Suspecting, from the history, a possible typhoid, the abdomen was examined. Several typical rose spots were present and the left hypochondrium examined for the confirmatory palpable spleen, which could not be detected. It was at this time, before the systematic routine examination, that my attention was directed to the right sided portion of the heart.

Thinking that other organs as well as the heart might be misplaced led to the discovery that the liver was on the left and the spleen on the right side. At the time of the first examination, during the typhoid, the spleen was easily palpable two fingers below the right costal arch. After a mild course of about three weeks' duration patient made complete recovery.

(b) Physical Examination:—General physical condition is good. Head and neck are negative.

*Chest.*—(1) Heart: Inspection and palpation reveals the apex beat in the right fifth intercostal space about one inch inside of the nipple line. Cardiac outline by percussion shows the base to be at the upper border of the third right costal cartilage and rib extending about one inch to right of the sternum. The left border is at the left border of the sternum. The right border from the right end of the base line to apex beat. Auscultation is negative except that maximum intensity of tones corroborate location of apex as previously indicated. (2) Lungs: Negative, except normal pulmonary signs are present where cardiac findings should be and such are present to the right of the sternum. Traube's space is absent on the left but present on the right side.

*Abdomen.*—(1) Liver: Percussion determines liver dullness is located on the left side, with gastric tympany on the right. (2) Spleen: Dullness on right side—not palpable.

*Extremities.*—Patient is right handed but uses left almost as much.

*Genito-urinary.*—Right testicle is more dependent than left. To assist in the more accurate location of the heart, liver and spleen a röntgenogram was made.

Believing that the stomach is also transposed, the patient was given one ounce of bismuth subnitrate and a second röntgenogram was made. The most interesting feature consists in the possible mistaken conclusions to which the condition might lead. Some of these are the following:

1. With an obliteration of Traube's space, dullness in the lower left chest and the heart displaced to the right, the diagnosis of a left sided encysted pleurisy with an effusion is quite possible.

2. Dextrocardia, congenital or acquired, could be diagnosed if the other conditions were not determined.

3. The impossibility of palpating the spleen in the usual location in those conditions in which it is enlarged, might cast doubt on the probable diagnosis as first occurred in this case.

4. In case of a cholelithiasis the pain would be located on the left side. This condition associated with jaundice and absence of the hepatic dullness in the normal location might indicate the existence of an acute yellow atrophy of the liver, which diagnosis was actually made in one recorded case.

5. As other organs are transposed it is reasonable to conclude that the appendix is on the opposite side. This being true, in case of appendicitis the findings would be on the left.

#### DISCUSSION OF CASE PRESENTED BY DR. TICE.

Dr. Charles A. Parker:—Mr. President, I have seen two other cases of situs transversus besides this case, one in the cadaver. The first case that I ever saw was in a female cadaver shown before the Association of American Anatomists five or six years ago, and then I saw a case in Rome, in a serving man. That was

complete situs transversus. It was discovered the last day I was there, and the landlady being an English woman, and thinking I would be interested, told me about it.

Dr. Tice has asked me if I have ever seen this condition in the dissecting room. While I have had experience with 600 or 700 cadavers, I have never seen it, but that is not a great number of cases in which to discover an anomaly of this kind.

The President:—My experience has been very limited. While assisting the late Prof. J. S. Knox as far back as 1885, I think, he presented a case in the children's clinic with transposition of the heart, and there was some question as to whether there was transposition of any of the abdominal viscera. The case was to have reported at the clinic, but we lost track of it. Jacobi showed a case in 1883 in the College of Physicians and Surgeons at a clinic. I happened to be present. There was transposition of the heart and liver. While serving on the Pension Examining Board with the late Dr. Blake and the late Dr. James Lydston, we found an old soldier with transposition of the heart, liver and spleen.

Those are the nearest approaches I have seen to this anomaly presented by Dr. Tice. I think I have seen half a dozen cases of transposition of the heart, one on the cadaver and the other on living patients, but it must be that this transposition of the abdominal and thoracic viscera is very rare, as Dr. Tice has been looking over the literature and finds little mention of it.

Dr. Max Biesenthal:—Mr. President, some four or five years ago we had a case in one of our charitable institutions of a patient suffering from pulmonary tuberculosis, whose apex beat of the heart was at the nipple line on the right side. The man died, and a postmortem examination showed that he had complete transposition of the thoracic viscera, the abdominal viscera being just as they are in the normal individual. The left lung had three lobes, while the right lung consisted of only two lobes, and besides there was a complete transposition of the cardiac vessels. Owing to carelessness I do not believe that this case has ever been reported before any society.

In closing the discussion Dr. Tice said:—This boy is one of a family of five children. The other children are all perfectly normal as far as can be determined. An examination of the father and mother also revealed perfectly normal conditions.

Dr. William Cuthbertson presented a case of intestinal fistula closed by the use of Beck's paste.

#### INTESTINAL FISTULA CLOSED BY USE OF BISMUTH PASTE (BECK).

WM. CUTHBERTSON, M.D.

Associate Gynecologist, Northwestern University Medical School; Gynecologist to St. Luke's Hospital.

Intestinal fistulae not infrequently result after abdominal and pelvic operations, more especially where dense adhesions of the intestines themselves or adhesions formed between the intestine and other of the abdominal or pelvic contents have had to be separated or broken up. Fortunately in the majority of cases these fistulae close spontaneously; all that is required to accomplish this result is to keep the patient quiet in bed and regulate the diet and bowel movements.

Unfortunately, however, some fistulae persist and require one or more operations before they can successfully be closed. Where the adhesions in a case of intestinal fistula are not too dense and the bowel can be easily isolated, it is not such a difficult matter to permanently close one of these unnatural openings, but on the other hand occasionally a case will present itself in which the abdominal contents seem to be glued together in one conglomerate mass, and any efforts on the part of the surgeon to separate the dense adhesions are entirely futile. These are the cases in which we find fecal fistulae persisting in spite of repeated efforts on the part of the surgeon to obliterate them.

The case which I present here this evening is one of the latter class. The patient, Mrs. J. M., was operated on in the Cook County Hospital in September, 1907, some pelvic work being done, the exact nature of which we are ignorant. A fecal fistula made its appearance after the operation. In January, 1908, an attempt was made to close this fistula but without success. She was again operated upon in March and July of the same year, the fistula remaining unclosed after each one of these operations.

In August, 1908, she entered my service at St. Luke's Hospital, where I made an attempt to close the opening into the bowel. On entering the abdominal cavity I found all the intestinal contents completely glued into one mass, with adhesions so dense that it was impossible to separate them without danger of doing extensive damage to the bowel. The adhesions were so widespread that I could not isolate sufficient intestine to exclude that portion which was involved in the fistula. I contented myself therefore with excising the mucous membrane of the fistulous opening, suturing the edges together with fine silk and covering over these stitches with interrupted Lembert sutures. After a long and tedious operation the patient was put to bed in fairly good condition. In the course of four or five days the fistula again became patulous.

Having used Beck's paste in a former case of postoperative intestinal fistula with apparent good results I determined to try it again on this patient.

Prior to injecting the paste I got the wound as clear from pus as possible by the use of a 10 per cent. iodoform emulsion in glycerin. This emulsion was used every day for several days, at the end of which time there was a very slight amount of pus discharging from the opening. I then began the use of the paste, injecting first iodoform emulsion and then the paste immediately after. The paste was injected every other day for a period of two weeks, then once a week for three weeks, at the end of which time the fistula closed and has remained so ever since.

From the experience which I have gained with this patient and the one which I mentioned before I find it is absolutely necessary to keep the patient in the recumbent position in bed in order to procure a successful result. If they are allowed to get up and move around the paste is immediately expelled either by the action of the abdominal muscles or the pressure of the intestinal contents and it is impossible to secure a permanent closure. It is also necessary to use the iodoform emulsion in order to get rid of the pus, otherwise the pus will well up around the plug of paste and render it inert.

I consider Dr. Beck's paste as one of the most valuable agents in the treatment of these intractable and distressing conditions.

#### DISCUSSION OF CASE PRESENTED BY DR. CUTHBERTSON.

Dr. E. S. Trostler:—Mr. President, I can report a case of fistula that persisted for about six months. It was about the size of an ordinary lead pencil, and two and a half inches deep. The woman was about 32 or 33 years old. She came to me with large quantities of feces and pus coming from the fistula, and after cleaning it out I injected first a soft paste and applied a swab over the top until it hardened. I injected twice a week for three weeks. At the end of that time I saw it was closing. I once used the hard paste, that is, paste with 10 per cent. paraffin, and it opened up again, and feces began to come from it. I then returned to the soft paste. I had to open quite an area of skin in the scar, and found that below the skin surface the fistula was about one and three-quarter inches deep, and just permitted a small probe to pass down. This woman is now up on her feet all the time, and for the past two weeks there has been no discharge whatever.

Dr. Carl Beck:—Mr. President, the fistula the doctor has presented does not seem to be entirely healed because there is a small sinus in the center, but from what I understand it is not a fecal fistula any more. It is discharging some pus. For all practical purposes it is perhaps cured, but it will not be considered healed until there is absolutely no discharge, and the sinus is replaced by connective tissue.

We have had a number of fecal fistulas, and I would say that our experience presents three points. First: Where the fistula was the result of some tubercular process (intestinal tuberculosis is quite common, and causes ulceration of the bowel), then in case of laparotomy we have no closure, but we have constant discharge of fecal matter. I had a chance to make a postmortem examination, which gave me a very clear idea of what is going on in such a fistula. This class of fistula treated with the paste does not promise much. The second class of fistula is one which is the result of suppuration of the appendix or tubes or suppuration of the other organs complicated by an intestinal opening, and where the sinus tract is a long one, the opening from the abdominal wall distant from the opening of the bowel. That is the class of fistula presented by Dr. Cuthbertson, and is the most favorable. We have found no necessity to use antiseptics for cleaning, and we inject the fistula without any preparations except on the outside. The third class of fistula which can not be treated in this manner is the so-called lip fistula, where the abdominal wound and intestinal opening meet, and where the mucous membrane grows over the fistula, and the skin grows over towards the intestinal opening, forming a sort of cicatrix with epidermization and mucous membrane formation. Such a fistula will never close except by operation.

Now in regard to the treatment, there has been great praise but also some adverse criticism. Only yesterday I received a letter from Berlin, together with some reprints of papers containing mostly satisfactory results, but one report of poisoning and unsatisfactory result. When I first started this treatment I knew that it would require a great deal of the doctor's and patient's time. It requires the closest attention, not only to take a syringe and inject that bismuth into the fistula, but to observe the case, whether they are tubercular or infected otherwise, and so on. It takes a great deal of my brother's time with two assistants to examine and take skiagraphs, but only in this way can the best results be obtained. Some foreign observers write that they have given their assistants an order to inject, and that after four or five injections they found that the results were not satisfactory. Of course they will find poor results, but if a man takes his time, conforming to the individual indications, he will obtain excellent results. My brother has obtained very good results because he pays very close attention. These cases must not be treated in a haphazard way without any individual indication.

In closing the discussion Dr. Cuthbertson said:—The case I presented to-night did not show the tortuosity Dr. Beck has drawn here. It is a more direct fistula, such as this one here. From my experience I believe we have two forms of fistula resulting postoperatively, one in which there is separation of the abdominal muscles, and hernia persists along with the fistula. In this case you get the intestines lying close underneath the skin, and as a rule you have a good deal of cicatricial tissue. I am quite convinced from the limited number of cases I have seen that there should be a considerable amount of vitalized tissue lying between the intestine and the surface of the skin in order to get a successful result from the injection of the paste. A case like this I am quite sure would be comparatively easily cured, even as Dr. Beck says, without the use of an antiseptic. In a case of this kind, where you get a more or less direct opening, you have to prepare that surface for the reception of the paste. In a case in which I had a failure there was postoperative hernia, and the intestine lay very close to the skin of the abdominal wall. In a case in which I had a good result there was considerable vitalized tissue lying between the skin and the intestine itself.

#### CARIES SICCA.

Dr. Max Reichmann presented three cases of caries sicca.

Dr. Thomas J. Sullivan:—Mr. President, caries sicca is a form of tuberculosis confined to the shoulder joint, and was first described by Volkmann. The most characteristic feature of this kind of caries is absence of suppuration, absorption of the shoulder joint, and often the head of the scapula, sclerosis and concentric atrophy of the articular head of the bone. Caries sicca is a rare form of joint tuberculosis not infrequently traceable to a trauma. It may be present in chil-



dren, but is more frequent in adults and middle life. Marked atrophy of the muscles of the shoulder fixation with tilting out of the elbow simulating a luxation, hollow under the acromion, accompanied by pain on efforts of motion, are the most prominent diagnostic signs on inspection. As the disease progresses there are the systemic signs, such as anemia, loss of sleep and appetite. This disease may be mistaken for rheumatism by the general practitioner. In the advanced state I have known the mistake to be made of diagnosing this disease as subcoracoid luxation. Dr. Reichmann informs me that of five thousand skiagraphic plates made for diagnostics that he has found only four cases. I have seen and treated four cases, one a female of 5 years, one a woman of 40 years and two males aged 19 and 28 years. The adult female, a case of about three months' duration, received at two week intervals a 10 per cent. iodoform glycerin inter-articular injection. This was followed by cessation of pain and apparent cure as observed one year after treatment. The young male adult improved after an inter-articular iodoform injection, but was lost sight of before a final result was obtained. The last two cases are now under treatment and observation. Dr. Seun's book on "Tuberculosis of Bones and Joints" should be consulted, as it has the best description of the disease to be found in any of the text-books.

Dr. V. J. Baccus:—With reference to the remark made by Dr. Reichmann that one of his cases might have been suffering from a specific osseous inflammation, I wish to report a case of syphilitic osteochondritis of the head of the right femur in a young boy, aged 6, illustrating the difficulty at arriving at a correct diagnosis. Family history, negative. Personal history, negative. The present illness began about one year ago. The mother of the child noticed that the infant's gait was abnormal, and discovered a stiffness of the right hip joint. She consulted Dr. G. Osborne, who called me into consultation. The examination revealed an apparently well developed child; no glandular enlargement; teeth and throat normal; no evidence of rickets. The right hip was painful and fixed. No shortening existed. Attempt at rotation caused the child to cry. The great trochanter was in normal position and relation to Nélaton's line, and no peri-articular swellings. The temperature slightly elevated; the pulse normal. The skiagraph of the hip presented a cavity in the right femoral head, and looked to be tubercular. This type of tubercular disease of the hip was an ideal one for surgical interference, that is, opening the joint, curetting the cavity, and filling it with Mosetig-Moorhof iodoform plug. The parents consenting to have the joint explored, this was carried out as follows: A longitudinal incision over the right femur and the muscles divided and retracted and the joint opened. The head of the femur was located out of its cavity. There were no fluids in the joint. We noted an irregularly formed femoral head, with the cavity at its apex, as shown by the x-ray; an absence of the ligamentum teres. The cavity was lined by cartilage, the surface of which was also irregular. The femoral neck was thick and irregular. From these findings we favored a diagnosis of congenital syphilis. Small pieces of the cartilage removed for microscopical examination revealed no tuberculosis. The hip was replaced and the joint closed. A cast applied for ten days, and the patient put on specific treatment. He made a good recovery, with full joint motion.

In the future such a patient should receive the benefit of the Wasserman blood reaction, and I should recommend strongly the services of W. J. Butler, who has done so much work along this line. The therapeutic diagnosis test should also be tried.

Dr. Reichmann, in closing the discussion, said:—The difference between syphilis and tuberculosis of the bones is very marked. In tuberculosis we have always atrophy of the bone, in syphilis marked hypertrophy, and in this case I found only atrophy, and therefore I diagnosed it as tuberculosis.

#### CARCINOMA OF ANGLE OF THE MOUTH, WITH PLASTIC REPAIR.

VICTOR J. BACCUS, M.D., CHICAGO.

This patient is 52 years of age, with a specific history of about fifteen years' standing. A year ago he noticed a beginning growth in the left angle of the mouth, involving more of the mucosa than the skin. It soon ulcerated and in-

volved the tissue of the angle of the mouth to the last molar. The digastric and masseteric glands were enlarged, but the carotid lymphatic glands could not be palpated. A small piece of the growth was removed for microscopical examination, which was made by M. Herzog, which proved to be carcinoma.

Following the excision of such growth, one meets with considerable difficulty in exhibiting a plastic repair which leaves very little deformity. As you notice, the deformity in this patient is very slight; in fact, practically unnoticeable. The steps in the operative technic were as follows: First, excision of the growth and the cervical lymphatic glands. Second, the liberation of the entire lower lip from the inferior maxilla. Also a separation of the lower lip from the right angle of the mouth. Third, liberation of the open lip and left cheek. Fourth, incision downward and outward from the angle of defect to the angle of the jaw. Fifth, the downward displacement of the upper part of the cheek and rotation upward of the lower half of the cheek. Sixth, displacement of the lower lip to the left. Seventh, coaptation of so formed flaps with fine silk, and moist borie dressings applied.

Other methods of meloplasty are easier and consist, as a rule, of two pedicle flaps made from the neck, one to line the buccal cavity, and the other to replace the defect of the skin by the excision of the growth. The chief disadvantages of the latter method are the longer period of convalescence. This patient has received x-ray treatment for the period of a month, and up to the present day there is no evidence of recurrence.

CASE 2.—Man of 51; specific history; infected about fifteen years ago. Three months ago the patient consulted Dr. W. Vary for an ulcerative tumor of the floor of the mouth. The latter physician recommended excision of the growth, as he believed it to be malignant. However, the patient was placed on a rigid systemic and local antispecific treatment, with no result. Operation: The cervical glands of the corresponding side of the neck were removed. Second, excision of the growth and closure of the defect in the floor of the mouth by a flap made from the tongue. Results: Ten weeks after the excision recurrence from a point near the middle of the floor of the mouth, with rapid involvement of the tongue and inferior maxilla. Although the patient received x-ray treatment and Coley's toxin, microscopical examination by Dr. Herzog showed the tumor to be a carcinoma. The course of this tumor corroborates the observation of Ritter of Berlin, who lately reports five cases of malignant tumors of the buccal cavity, with a history of syphilis, and in every case the tumor was of the most malignant type.

CASE 3.—Floating cartilage of the left knee joint. Transverse division of the ligamentum patella in order to expose freely the joint cavity. Patient, aged 42: had been troubled the last ten months with tenderness and the locking of the knee joint at times. About three months ago, while examining his knee, he discovered a small round-shaped body, felt by him along the inner border of the patella. By abducting the thigh and abducting the leg, he could demonstrate at will this foreign body, diagnosed as floating cartilage. The patient entered the Policlinic Hospital and received a general and local preparation of the operative field. Operative technic: A two-inch longitudinal incision along the inner border of the patella was made. The foreign body which we had located and localized by digital means prior to making the incision could not be found. Repeated identical manipulations of the limb which had always brought the foreign body at the site of the incision, as well as digital exploration of the joint, failed to locate the cartilage. The lower end of the incision was carried downward and outward to the tuberosity of the tibia and the outer border of the external condyles. Transverse division of the ligamentum patellæ exposed fully the joint cavity. The foreign body was found in a small recess of synovial membrane, under the quadriceps extensor tendon. Closure of the synovial membrane with the eversion of its edges by the removable wire. Closure of the ligamentum patellæ also by wire. Interrupted silkworm gut sutures in the skin. Small gauze drain at the

inner angle of the wound, which was removed at the end of forty-eight hours. Light plastic cast applied. Beginning passive motion on the sixth day. Primary union, with full restoration of joint function.

#### DISCUSSION.

Dr. Emil Beck:—I wish to say that the first case that the doctor presented shows comparatively a very good plastic result. It is unfortunate that these plastic results should occur in such cases, because I am afraid that recurrence, if not present, will appear shortly. In traumatic lesions this would be an excellent matter. Those surgeons who have had experience with plastic results in the face will know how difficult it is to gain good results.

The doctor has mentioned that both of these cases has had syphilis. There is one very interesting observation in this respect published by Rosin, whom you all know as being a very careful biologist and close observer. Rosin says that in all his experience he has seen very few cases of undoubted diagnosis made by a biologist and a surgeon that would correspond. If the biologist made a diagnosis of sarcoma the clinician made a diagnosis of syphilis, and if the clinician made a diagnosis of syphilis the biologist made a diagnosis of sarcoma. In investigating how this came about he found that it is a most difficult thing to differentiate between sarcoma and syphilis. That accounts for the so-called cures with different methods, particularly the Coley treatment. Some years ago I used the Coley treatment in the County Hospital, and treated ten cases of sarcoma and carcinoma. There was one case that I think was positively cured of sarcoma, which we had diagnosed, and it proved to be a case of syphilis in after years. We should be very careful in regard to the diagnosis of tumor in individuals with a syphilitic history.

The second point is in regard to the technic. I would not undertake any operation on or near the face without starting from the carcinoma and taking out the whole block in one piece. An operation in the neighborhood of the jaw without removing the jaw is of absolutely no value. It is proved by biologists that the lymphatics contain large nests of carcinomatous cells, and that it is absolutely valueless to remove the gland and leave the deeply injected lymphatics behind. I have two cases in which we did the block operation on the upper jaw, which we are going to present to the society after we have observed them a little longer. It is of no value to show a case of carcinoma two or three or four months afterward. Carcinoma of the mouth that has not returned for three years is still of a doubtful nature. I have seen recurrence four years afterward, and even six years is not a long time to elapse before you can say a case is absolutely cured.

Dr. Daniel T. Nelson:—I have a case that may interest the general surgeon. It interested me very much, although I was not a general only a gynecic surgeon, but I did the work the best I could. In 1891 I was away on a vacation. There was a relative in the town 17 years of age. He was sitting on the ground whittling out some toy with his knife, when the toy broke, and the point of the small blade went somewhere into the knee. He immediately and instinctively straightened the knee at once. I was called, and the family physician came soon after. I found him lying on the grass, still with the leg extended in this position (illustrating), and he could not and would not bend the knee. After the clothing was removed the injury was found to be exactly in the center of the patella. The knife we found soon after lying in the grass, with the point of the small blade gone. To straighten the leg hurt so intensely that he would not allow it. Under ether I found that there was great difficulty in flexing the leg. I supposed the point of the knife was somewhere in the patella, for the skin wound was exactly in the center of the patella. I first enlarged the wound over the patella, and soon found that there was no injury of the patella apparent. I supposed the point was inside of the joint somewhere. I made a longitudinal incision with the knee in the extended position, through the tendon of the quadriceps, and attempted to insert my finger to find where the point of the knife was, for I was satisfied it was in the joint somewhere. I could not get my finger under the patella to discover anything, but I was satisfied from the position that

it was more likely to be in the outer border of the patella than the inner. I made an incision on the outer side of the patella, and with difficulty I could reach some foreign body. I attempted to raise up the patella, as I was not a sufficient surgeon to be anxious to cut the tendon completely off at this point. I soon found that the only thing I could do was to cut the ligamentum patella, and then dissecting about it I turned it up, and there was the knife blade securely implanted near the center of the outer condyle of the femur. I did not then know that the patella traveled such a long distance in the flexion of the joint, for the knife blade had evidently entered the condyle above the patella when the knee was fully flexed sitting on the ground and breaking off when the leg was suddenly extended, had passed under the patella and been driven in by it, as was plain from the rasping of the under side of the patella now in full view. The next thing to do was to remove it. There was one-tenth or one-fifteenth of an inch exposed, but I could not pull it out with any forceps we happened to have; but by working it back and forth from its arrow-like shape I was soon able to remove it, and then dressed the wound in the way you might suppose, by putting ligatures into the tendon of the patella and suturing the other wounds that had been made. I could not get kangaroo tendon, so used catgut, and dressed the limb with a posterior splint. The outcome of the case was that at the end of two or three months he was able to flex and extend the limb to that extent (illustrating), but he would not, on account of the pain, allow any further flexion, but at the end of three or four years he was playing football or baseball, and in a mixup he did flex the limb completely, and he has had a good knee ever since.

Dr. Aimé Paul Heineck:—Dr. Baccus is to be congratulated upon the successful outcome of his case. The knee joint, of all the joints in the human body, is the one that is most frequently the seat of foreign bodies. These foreign bodies may originate from within the articulation, may be introduced from without, such as pins, needles, bullets, etc. Not infrequently they are due to previous traumatic or pathological processes in the articulation. Articular foreign bodies may be single, may be multiple, may be small, may be large. Their shape is variable. They may be of a fibrous, fatty, cartilaginous, osteocartilaginous, or of an osseous nature. They may be free in the articulation; they may be attached by a pedicle to some part of the articular wall. Their presence always impairs the functional integrity of the joint, and when not associated with arthritis deformans, or other general disease with joint manifestations, it is imperative that they be removed.

In the diagnosis of obscure joint affections, skiagraphy is of invaluable service. The division of the ligamentum patella in cases of this nature is a measure of necessity. Other clinicians have, at times, had to employ the same incision. Chaput of Paris, in removing a foreign body from a knee joint, employed the same technic as described this evening by Dr. Baccus.

In the removal of foreign bodies from a non-septic knee joint, we must keep in mind that it is needless, in fact, that it is dangerous, to irrigate the articulation or of the periarticular tissues serves no useful purpose. For the approximation of the divided tissues only absorbable suture material should be used. Therefore, in the removal of foreign bodies we discard irrigation, drainage and all buried sutures of non-absorbable material. To locate and to remove the foreign body in the case presented by Dr. Baccus, it was necessary to completely divide transversely the ligamentum patella. After removal of the foreign body, the divided tendon was reunited by sutures. It has healed and now its anatomical and functional integrity are completely restored.

I here show you a skiagram of a case of knee joint injury admitted to the Cook County Hospital. In this case the ability to actively extend the leg on the thigh was lost. There was a distinct sulcus between the divided margins of the ligamentum patella. On the affected side the patella was 5 cm. higher than on the uninjured side. The joint was swollen. Its contour was altered. The condition could easily have been mistaken for a fracture of the patella. An x-ray picture demonstrated the exact nature of the condition. We were dealing



with a complete traumatic subcutaneous rupture of the ligamentum patella. The seat of rupture was exposed: the divided tissues were reunited; cure resulted. In all complete divisions of the ligamentum patella, in all complete divisions of the quadriceps extensor femoris muscle, in all complete transverse or oblique fractures of the patella, the power to actively extend the leg on the thigh is either partially or completely lost. The way, and the quickest way, to overcome this impairment or loss of function, is to restore the continuity of the extensor apparatus of the leg. Functional integrity goes hand in hand with anatomical integrity.

I want to add that in the repair of a divided quadriceptal tendon or of a fractured patella, or of a solution of continuity of the ligamentum patella, the operator will find that the most serviceable incisions are those that give a flap with a convexity upward or downward. The toilet of the synovial cavity is best effected by mopping with dry gauze sponges. Irrigation of the articular cavity must not be resorted to. In the treatment of lesions of the extensor apparatus of the leg, what we said with reference to the removal of foreign bodies from the articulation, can be repeated with added emphasis; no irrigation, no articular or periarticular drainage, no buried sutures of non-absorbable material. It is needless to add that these operative procedures should only be performed with rubber-gloved hands.

Dr. Baccus, in closing the discussion, said:

The reason I mentioned that these cases had a specific history was that a writer of Berlin calls attention to the fact that in some of these cases that give a history of specific disease, for some reason the tumor assumes almost a malignant type.

With reference to the removal of the lower jaw, I must say that in the first place the tumor did not involve the mucosa of the lower jaw, but simply the soft tissue extending downward.

In the last case which I have shown I suggested to the man that I would do such an operation, but unfortunately he was financially situated so that he could not have the amputation performed.

In the last case, speaking of metallic sutures and the longitudinal incision, we could not find the foreign body in the patella and decided on dividing it. I used wire for the reason that I did not want to introduce any catgut in the joint. Everybody used gloves and still we had an infection.

In closing the perineum, I use wire and leave it in ten or twelve days.

#### *CHICAGO SURGICAL SOCIETY.*

A regular meeting was held Nov. 6, 1908, with the President, Dr. A. E. Halstead, in the Chair.

#### *CASE OF POSTOPERATIVE MILIARY TUBERCULOSIS.*

Dr. William E. Morgan read a paper on this subject, in which he reported the following case:

Mr. D., laborer, foreigner, aged 28, presented himself for operation for chronically enlarged cervical glands of large size which came on rather rapidly six years before; caused some general malaise and disturbance at times; soon reached the maximum in size; had remained about the same since, and had given him practically no disturbance. These enlargements involved the posterior and anterior chains of both sides, but larger on the left than on the right side, the latter being the most recent in involvement. As the patient presented himself the speaker was impressed by his remarkably robust, healthy general condition, a careful physical examination failing to uncover a sign of disease elsewhere. A diagnosis of tuberculous cervical adenitis was made by exclusion, with some hesitation because of his remarkably healthy general appearance.

He operated by the usual stereotyped method, as outlined by Plummer and Schroeder, first placing a provisional ligature around the very large internal jugular vein an inch above the sternoclavicular junction. The glands were

unusually hard, the periadenoid fascia being intensely tough, old, and entangled, causing the veins to become very tortuous and varicose. As he stripped the chain from the lowest part of the vein he noticed lying longitudinally on the muscles exposed by the collapsed vein at its point of provisional ligation a delicate, translucent envelope of fascia, about an inch long, which gradually grew larger, with a steady flow of opalescent fluid from above, until, when about the size of an ordinary match-stick, it slowly emptied itself from below upward. This emptying was not synchronous with the pulse, was not influenced by respiration, and was not vermicular. He had practically finished his dissection and was reviewing the whole field, seeking for stragglers which had escaped his eye and fingers, and had found one below his ligature close behind the sternoclavicular angle about the size of a small pea, and proceeded to work it loose with his finger, when there was a sudden welling of blood, a deep inspiration hiss, immediately followed by restless, tumultuous heart and breath, and the usual chest rasp, and foaming mucus from the mouth and nose of an air embolism. He at once stopped the opening in the vein and placed a snip forceps on it, leaving the forceps *in situ*, and then made a permanent double ligature of the vein above. In three or four moments the heart became quiet, respiration became calm, and he was enabled to finish the operation without further incident, the patient leaving the table in good condition, with a steady pulse of 108 and respirations 22, full and free. When the patient became fully awake he began to howl with agonizing pain in the lowest lateral area of the left chest, and a physical examination showed an area about the size of the palm of the hand, dull on percussion, with no fremitus, and a prolonged hissing expiratory sound. The voice sounds were ragged and of high note, not at all of the bronchial character of a pneumonia, nor were they of the bleating character of a bronchial obstruction or of a cavity in the lung. These physical signs only accompany a collapsed lung, and in this case he could understand the condition in no other way than that there was an infarction of some rather pretentious branch of the pulmonary artery. From this time on the patient went through all the varied and progressive stages of multiple foci of tubercular infection in his lungs, kidneys, peritoneum, pleura, eyes, brain, and meninges until on the 22d day after operation he succumbed to basilar meningeal invasion, his temperature recorded in the axilla being from 106.9 during the last twelve hours. This is his first personal experience with air embolism in practical surgery.

#### DISCUSSION.

Dr. M. L. Harris said that in removing a chain of tubercular glands from the neck he had a similar experience in so far as the laceration of the veins was concerned, and the air. It was on the right side, and a tear in the vein took place at the junction of the subclavian and the internal jugular. The entrance of air into the vein occurred, as manifested by the sound, the heart's action, etc., but it was at once plugged, and no bad result was noted.

Dr. Alexander Hugh Ferguson said that while he has not had a similar experience of air embolism on the operating table, he has had three cases of miliary tuberculosis following operations on the neck for tubercular glands. The patients were in an apparently healthy condition before the operation, so that he could say they were postoperative cases of miliary tuberculosis. The three cases were cited in detail.

Dr. D. A. K. Steele related the case of a woman, 46 years of age, from whom Senn removed all glands on the right side of the neck three years ago, and she was free from tubercular adenitis until three or four months ago, when the glands on the left side became involved. He made a typical dissection of the left side, removing the glands, noticed they were hard, and had a good deal of periadenitis and extending well down toward the mediastinum beneath the notch. There were two or three nodules away down and in a location where he found an inaccessible gland, apparently the last one. He did not like to leave it, and while fishing it out his attention was called to the same ominous

hissing sound as Dr. Morgan has described; in drawing up and teasing out the gland he had ruptured the vein deep down in an inaccessible place. The hissing sound continued. He filled the cavity with normal salt solution, which excluded air promptly, and followed Dr. Harris' method of putting in a conical plug, packing with iodoform gauze, finished the operation, and no ill results followed. The patient left the hospital yesterday perfectly well from the operation. Whether military tuberculosis would develop later he could not say.

Dr. D. W. Graham was called urgently once to the hospital to see a case that an outside physician had been operating on, and when he arrived the patient was dying. The account given was that in removing glands of the neck on the left side from under the clavicle there was sudden profuse hemorrhage, followed by an ominous hissing sound and struggling on the part of the patient. Artificial respiration and other local measures failed to revive the patient. The vein had been ruptured accidentally, and while attempting to control the hemorrhage the hissing sound was first heard. In this case air embolism he thought was undoubtedly the cause of death.

The subject was further discussed by Dr. E. J. Senn, and the discussion closed by Dr. Morgan.

#### THE USE OF TUBERCULIN IN SURGICAL TUBERCULOSIS.

JOHN C. HOLLISTER, M.D., CHICAGO.

##### DISCUSSION.

Dr. Edward H. Ochsner said they had treated a considerable series of cases of tuberculosis combining the tuberculin injections, under the control of the opsonic index, with the other recognized methods of treatment, and he is fully convinced that they have done appreciably better than a similar number previously treated without the aid of tuberculin. He believes they have had several cases which would have died had they not used this remedial agent. He recently discharged a woman suffering from tuberculosis of the skin who had been under vaccination treatment for six months. She had apparently recovered under this treatment, while all other methods, including *x-ray*, had not been successful. He believes that if tuberculin is used in conjunction with other measures in the treatment of tubercular joints, we will get a very much larger percentage of good function results.

#### TUBERCULOSIS OF THE KIDNEY.

M. L. HARRIS, M.D., CHICAGO.

##### DISCUSSION.

Dr. Alexander Hugh Ferguson recalled having had two cases of very advanced tuberculous of the kidney, in one of which the left kidney was completely destroyed. In these two cases nature had obliterated the circulation to the kidneys, so that in removing them it was a simple matter to scoop out the kidney tissue; it was not necessary to apply any ligature to the pedicle. He looked up the literature very thoroughly at the time and found a number of cases reported. It is quite possible in these cases where a diagnosis is made of tuberculous of both kidneys, the disease being more advanced in one kidney than in the other, that when the more involved kidney is removed the other kidney may not have been diseased at all, simply excreting the tubercle bacilli without actually being involved in the tubercular process.

Dr. A. J. Ochsner said that the recovery of a tuberculous kidney when the other organ has been removed, and the continuation of the progress of the tuberculous in both kidneys when neither kidney has been removed, must be explained on the theory of hyperemia. It is known that with Bier's hyperemia the progress of tuberculosis can be stopped, and the disease can be cured in many parts of the body, and there is no doubt but that when one kidney is removed there is enormous hyperemia of the other kidney. This he has had an opportunity of demonstrating this year in a case in which during the removal of a carcinomatous uterus with the cautery he burnt off the left ureter. The right kidney never

secreted more than twelve ounces of urine in twenty-four hours after this accident, so that he felt satisfied that the woman could not live with this one kidney if he removed the other. As she had carcinoma, it did not seem worth while to resort to an abdominal section, and implant the burnt-off ureter into the bladder; but after six weeks this ureter closed because he had evidently burnt it up high enough to have cicatricial tissue form and close it, so that it was necessary either to implant the ureter into the bladder or to remove the kidney. At this time the right kidney did not secrete more than six ounces of urine in twenty-four hours. He removed the left kidney, notwithstanding this fact, because of the bad condition of the patient. It did not seem as though the more serious operation of implanting the ureter into the bladder would prove successful. From that time on the right kidney began to secrete more urine: it advanced steadily until the right kidney, which had not secreted more than twelve ounces of urine at any time in twenty-four hours, since the hysterectomy was performed, secreted one hundred and two ounces of urine in one day. This was the highest point reached, and then it settled down to between forty and sixty ounces permanently after that.

Dr. E. W. Andrews said that in two consecutive cases occurring within a month in which he thought it absolutely necessary to have the urine from the opposite kidney examined, and in which he had used the segregator, but considered catheterization more definitely and positively certain, he failed to get the catheter into the ureter or to get any urine. Following such a failure, if one is bold enough to extirpate a kidney for tuberculosis, it becomes necessary to know whether only the method has been perfect, or how it may be determined that the other kidney is functioning. Formerly it was recommended by Thorburn and others to incise the abdominal wall and palpate through the abdomen. Later experience has led him to adopt an entirely different route, namely, incision of the opposite loin in those kidneys he removes through the lumbar route. It is a comparatively simple matter to open both loins, examine both kidneys, and he thinks a functioning kidney can always be determined to be such by inspection. He does not believe that nephrotomy for tubercular kidney is a good procedure. He has in several cases taken out a kidney without visible external evidence of disease, and has found only a few discrete foci of caseation in it, but in no case has he regretted its removal.

Dr. Daniel N. Eisendrath referred to cases of so-called mixed infection with the colon bacillus or the staphylococcus albus plus the tubercle bacillus. He cited a case which he saw within the last two months, and which illustrated this point very well.

Dr. William Hessert presented a specimen which illustrated very forcibly one of the rare forms of tuberculosis of the kidney, namely, a form where a distinct focus is present in the kidney without any renal symptoms, without any urinary symptoms, and without any findings in the urine. He related the history of the case in detail.

Dr. William Fuller said that total nephrectomy, in a case where the disease is extensive throughout the organ, offers the only hope of a cure; but many tuberculous kidneys are not so widely involved as this. There may be but a single focus occupying one pole of the organ, which is always accessible and demonstrable, and measures less heroic than complete removal of the kidney should suffice for a cure under these circumstances. While his experience has never enabled him to do this, he has repeatedly examined kidneys removed for tuberculosis confined to a small portion of the organ, and has been convinced that partial removal of such organs would have brought about a cure.

Dr. S. C. Plummer asked Dr. Harris what his practice is in the case of horse-shoe kidney, as he stated that he resorted to catheterization of the ureters.

Dr. Harris, replying to Dr. Plummer, said the point has been brought out a number of times as to whether it is impossible to inject a healthy kidney by catheterizing the ureters, but there are no cases in point. No one has been able to produce a case where this has happened.



## UTERINE MYOMA.

Dr. E. C. Dudley showed a specimen of myoma of the uterus which he had removed from a colored woman, 40 years of age. The woman recovered without complication.

## CRURO-SCROTAL HERNIA.

Dr. Alexander Hugh Ferguson reported a case of this kind occurring in a man, 47 years of age. The man had had the hernia for about thirty years. A truss failed to retain it in place, and at times the pain was so severe that it incapacitated him for all kinds of labor, mental as well as physical. On examination it was found that the mass in the scrotum was to the outer side of the cord, and that it emerged from the abdominal cavity below Poupart's ligament. No external abdominal ring could be felt. At the operation it was found that the inguinal canal on the right side, where the hernia was situated, was entirely absent. The hernia passed through the femoral canal into the scrotum. There was a cremaster muscle. The contents of the sac consisted of omentum and a small knuckle of bowel. The herniotomy was completed in the usual manner, and an inguinal canal was made through which the testis and cord were passed after having pushed back into the abdomen through the femoral opening. The internal oblique muscle in this case was attached throughout the entire length of Poupart's ligament.

JOINT MEETING OF THE CHICAGO LARYNGOLOGICAL AND OTOL-  
 OLOGICAL SOCIETY AND CHICAGO OPHTHALMOLOGICAL  
 SOCIETY.

*Meeting held Nov. 8, 1908.*

Dr. A. H. Andrews, president of the Chicago Laryngological and Otolological Society, in the chair.

## SYMPOSIUM ON RELATION OF SINUS DISEASE TO DISEASES OF THE EYE.

"Diseases of the Nasal Accessory Sinuses Which May Involve the Eye," Dr. Norval H. Pierce. "Dependence of Extracocular Diseases on Affections of the Nasal Accessory Sinuses," Dr. Casey A. Wood. "Dependence of Intraocular Diseases on Affections of the Nasal Accessory Sinuses," Dr. F. E. Brawley. "Intraocular Involvement Due to Sinus Diseases," Dr. Henry Gradle.

## DISCUSSION.

Dr. William L. Ballenger:—My most striking cases of ocular diseases due to nasal affections have come to me through Dr. Suker, who will report the cases.

Dr. William H. Wilder:—I was very glad to observe that Dr. Gradle merely mentioned that there is an association between eye diseases and accessory sinus affections, because it seems to me that sometimes the relationship is rather remote. It is not so difficult to determine an etiologic relationship between nasal and ocular affections, but I think it is much more difficult to determine that the cause of an ocular affection is in the accessory sinuses. It is true that in some cases the relationship is a closer one than in others, and we can understand how there may be a connection between sinus disease and retrobulbar neuritis, for instance, although I have never seen a case where I could say positively that it was caused by disease in the sphenoidal cells, or in the posterior ethmoidal cells. Yet such a condition may exist, and a keratitis, for instance, may be due to disease in some sinus. There are, however, coincidences which must keep us from jumping to conclusions. I think you will agree with me that no matter how careful an observer one may be, and no matter how large his clinical experience, he will find it difficult to say definitely that a certain disease of the eye in a given case is due to sinus disease.

We frequently have infection in the nose, and it is easy to understand how it may be carried to the eye either through the medium of the lacrimal apparatus or by means of the fingers, and we are all familiar with such cases. But direct

infection is more difficult and after the last word has been said in regard to sinus infection as a cause of eye diseases we will probably find that it is only a toxic affair, the result of toxins acting on the delicate structures of the eyeball.

I agree with Dr. Brawley, however, in this, that it is wise in all cases where the etiology is not quite clear to make a careful examination of the nose and its accessory cavities.

In this connection I wish to present a case which has some bearing on the subject under discussion. It is a case of acromegaly in a man, 36 years of age; he began to grow ten years ago, having been in good health up to that time. He increased in height from 5 feet 8 inches to 6 feet 2 inches. He now stoops considerably, owing to a kyphosis. He has all the signs of the disease. The skiagraph distinctly shows an enlargement of the sella tureica, the pituitary body and of the frontal sinuses.

Of 175 cases of acromegaly described by Hirtl, 52 per cent. showed eye symptoms. This man has pressure on the optic chiasm, and the result is an optic atrophy.

Dr. C. M. Robertson:—There are two divisions of diseases which may affect the eye through the medium of the accessory sinuses of the nose. The first is traumatism. If one of the sinuses is traumatized, especially the ethmoidal sinuses, an infection may follow involving the orbit or the globe. Several years ago I saw a patient who, while splitting wood, sustained an injury of the orbit just inside the globe from a flying splinter. A physician removed quite a large splinter of wood, and the patient apparently recovered. Thirteen years afterward the patient came to me with an eye fully exophthalmosed, with no symptoms, except that the eye was pushed down and out. I found a small sinus leading down into the orbit at about the place where the splinter entered. The patient had forgotten the accident. A muco-purulent discharge came from the nose originating in the middle meatus. On probing the latter I found rough bone and an increased flow of pus followed manipulation. I cleaned out the meatus and with a syringe forced fluid through it into the ethmoidal cells, with the result that the eye popped out much further than it did before the operation. I cleaned out the ethmoidal cells and found that I could pass a probe directly into the orbit over and under the optic nerve, feeling the nerve with the probe, and around the eye to the external wall of the orbit.

Although this man had had a discharge from the ethmoidal cells for thirteen years, there was no disease of the eye, which as to acuity of vision was equal to the companion eye. At the time of the operation I removed a large piece of wood,  $1\frac{1}{2}$  inches long and  $3\text{--}16$  of an inch wide, from the ethmoidal cells.

We may have cases of this kind following trauma in which there is an inflammation of both the optic nerve and the globe. In other cases the eye is affected by infection from pus in the nose or accessory sinuses following some other cause than trauma. It seems to me that most of the cases that we can class as diseases of the eye resulting from sinusitis are diseases in which the ethmoidal cells and the sphenoid cells are at fault. The posterior ethmoidal cells are in direct contact with the optic nerve, so that any affection of these cells may affect the tissues around them, or by pressure on the optic nerve by bulging sinus walls causing choked disc followed by atrophy.

In my experience there are a few cases in which the diseases of the frontal sinus affect the eye.

That brings us to the consideration of two kinds of sinusitis, suppurative and non-suppurative, which may cause similar symptoms.

Dr. George F. Suker:—I think that the discussion was well prefaced by Dr. Pierce's remarks. We must take into consideration the conformation of the head, and its relation to the various sinuses, and their relation to the optic nerve. Much depends on whether the head is small and narrow or large and wide, whether these sinuses, particularly the ethmoidal and sphenoidal cells, sustain a normal relation to the optic nerve. Quite a few patients have optic disease which gets well when the sinus affection is cured. Of course, it is a toxemia, the toxins being absorbed and carried around by the vicious circle described by Dr. Pierce.

It is a notable fact that abnormal conditions of these sinuses cause eye troubles.

Dr. Ballenger spoke of cases we had had. I will cite one of these. A well man, 32 years old, contracted an influenzal cold, but had no systemic infection. The right eye became absolutely blind; with the left eye he could not see fingers or recognize light. Personal history was negative. A thorough examination failed to reveal anything except the nasal condition. Dr. Ballenger cleaned out the sphenoids and ethmoids on one side, the left, and within forty-eight hours the patient could recognize fingers at two or three feet. From that time on he improved steadily, and at present has normal vision in that eye. He had an empyema of the sphenoid and ethmoidal cells on both sides. On the right side there was also much improvement, but not so great as on the left. The intraocular findings were a marked choked disc with hemorrhages. Both conditions cleared up in the right eye, but the atrophy probably occurred because the condition had been present quite a while.

Another case was that of a lady who had recurrent conjunctival edemas in the external palpebral angle whenever she had a cold. There was no pain in the eye, but the condition would hang on for weeks at a time. Dr. Ballenger cleared out the ethmoidal cells, and from that day there has been no recurrence of the trouble although the patient has had repeated attacks of cold.

There is no question about the connection between the eye and the accessory nasal sinuses in these cases. There certainly is a close anatomic relationship, vascular as well as lymphatic, between the two. It would be folly to say that optic neuritis or choked disc or intraocular hemorrhages or chorioiditis with no other findings should be caused by a sinusitis, but take these cases as a whole, and if the treatment of the ocular affection does not yield results, and if the rhinologic treatment is effective, it must be acknowledged that there is a closer relationship between the orbit and the sinuses than has hitherto been noted.

Dr. George E. Shambaugh:—There is certainly a very close anatomical relationship between the accessory sinuses of the nose and the orbit, and of the former with the optic nerve. The sinuses that come into close relationship to the orbit are the frontal sinuses, by orbital extension, the ethmoidal cells through the orbital plate, the superior ethmoidal cells when present, the antrum of Highmore. We have all seen cases of extension into the orbit of sinus empyemas showing that there must be a close connection between these two parts. Another condition which was pointed out by Dr. Robertson is the mucocele, but whether this can extend to the orbit is questionable. I doubt it, except in cases where there is congenital thinness of the walls of the sinus.

Whether it is possible for accessory sinus disease of any type to produce intraocular affections is another question. It may be possible, although we have no proof of it as yet. The fact that we do occasionally find intraocular disease in association with accessory sinus disease is not a definite conclusion that there is an actual etiologic relationship. We all know that intraocular diseases are frequently caused by other conditions. The mere fact that we find a relationship there is not positive evidence that the eye disease is secondary to the accessory sinus disease. We must be very cautious about forming hasty conclusions about connections of this kind. Nose and ear diseases have often been found associated, although there may be no relationship between the two. Nevertheless, many unnecessary operations are performed on the nose for this reason. So, too, if eye affections are attributed to disease of the sinuses, many unnecessary operations may be done on the latter in the hope of curing the former.

As to whether it is ever possible for disease of the posterior ethmoid cells or of the sphenoid sinuses to so affect the ocular nerve as to produce the diseases mentioned is rather doubtful. Take, for instance, the middle ear; there is a relationship between the nerve (facial) and the tympanum, but in the case of the eye nerve this happens only occasionally; it is not an anatomical condition. In the ear it is constant. Suppurative disease of the middle ear is far more frequent than accessory sinus disease, and yet any one who has much to do with the middle ear knows that it is very rare to find the facial nerve involved. If it is possible

for the optic nerve to be involved in disease of the accessory sinus it must be an extremely rare occurrence. I doubt whether many of us will have an opportunity to see such cases.

Dr. Thomas Faith:—I feel very much like placing myself in the same position with Dr. Wilder. I have been on the lookout for cases of retrobulbar neuritis due to sinus disease, but have not seen a case yet. I believe that in many cases of infection after cataract operation the infection is carried from the nose to the eye, the patient having ozema, or a suppurative sinus disease.

The benefit derived from operations on the ethmoid cells or on the middle turbinal, where eye symptoms are present, is in many instances undoubtedly due to the depletion at the top of operation. I saw that illustrated once in a case of severe iridocyclitis. The young man received a severe blow on the nose which was followed by considerable hemorrhage, and a pronounced improvement in his condition.

Dr. A. H. Andrews:—The pendulum is always swinging, and it seems to me that the ophthalmological pendulum is now swinging toward the nose. I am inclined to be conservative in my consideration of these subjects, and their relation to each other. I have had some experiences, however, that make me feel that there may be something more in this than most of us have thought possible. In two cases that I recall now I had an active conjunctival injection following exploration of the sphenoid cavity. It came on within fifteen minutes; disappeared within twenty-four hours. I do not think that it could be considered coincident. It was certainly due to the intranasal manipulations.

Rhinologists are constantly observing lachrymation, photophobia and pain in the eye as the direct result of intranasal manipulations. Since this is true I can see no reason why continued pressure in the nose or suppurative conditions in the nasal accessory cavities may not produce eye symptoms and even serious intraocular changes. I am therefore of the opinion that we will yet see a much closer relationship between diseases of the eye and nose and its accessory sinuses than have hitherto been recognized.

Dr. E. F. Snyder:—Recently there appeared in a German ophthalmological journal a very interesting discussion as to how much the oculist should meddle with the nose. The views of some were against and those of others for such interference. I think there can be no question that the oculist should be a rhinologist, to a certain extent. I looked up my own records and found that from six to seven per cent. of cases of ocular headache, where the cause was supposed to be in the eye, were due to sinus trouble, as was demonstrated later. I am sure that I overlooked some cases, and that I did not know about others. Many cases of headache go directly to the oculist, and it is his business to determine which of these are due to the eye and which to the sinus inflammation. Certain examinations must be made by the oculist or he will overlook the cause of the condition in a marked percentage of cases. Every patient with ocular headache should have his frontal sinuses examined. We should always look at one-sided headaches with suspicion. Periodic headaches are suspicious, especially when coming on in the morning. Always look for a sinus involvement in such cases. Look into the nose for polypi; often the worst ocular headaches will disappear with the removal of such growths. Make a careful rhinologic examination for pus. I think that one examination is insufficient. I have seen cases where the nose was examined frequently and no pus was found until after a great number of examinations had been made. Whether the oculist wants to extend his efforts to diagnosticate to operative manipulation, whether he is to remove a middle turbinal, is a question that must be decided by the individual, but I do think that if we do not make these examinations we will miss the correct diagnosis in a large proportion of cases.

Dr. Joseph C. Beck:—I agree with the last two or three speakers. In quite a number of eye cases in my practice there was a direct association with sinus involvement. I have been impressed by one point in the treatment of sinus disease, the report of a large number of cases of ocular affections cured by the simple



passing of a probe, or by irrigation, or treatment of the antrum alone, and was rather astonished at the good results obtained. Usually, in sinus disease, there is a combination, more than one sinus is affected, and one would not expect to get any results whatever from such incomplete treatment. I think that the association or connection between these affections is really a much broader one than the discussion so far has brought out.

Dr. E. Fletcher Ingals:—Some years ago I saw a patient who for two years had trouble with her eyes, so that she could not read. I found considerable hypertrophic rhinitis. I cauterized the inferior turbinal of one side and told her to go to an oculist for treatment of the eyes. She did not go to the oculist, but two weeks afterward her eye trouble had completely disappeared. I do not know what the relation was in this case, but presume it was reflex, due to pressure of turbinal.

Dr. J. E. Colburn:—Dr. Ingals cauterized a nose some years ago and immediately afterward the patient complained of low vision. He sent the patient to me, and I found the disc blurred and hyperemic. I assured the lady that after a few days the blindness would pass away. It did so within twenty-four hours, the hyperemia having disappeared entirely.

Another case that has made me rather timid about interfering was one in which a progressive atrophy had taken place. I could find nothing in the history, personal or family, to account for it. Vision was getting exceedingly low. I referred her to a rhinologist, who found frontal sinus disease, operated, and either coincident or otherwise, the vision rapidly lowered for a few weeks and never improved beyond what it had been at the time of the first consultation, although the nasal sinus condition improved. The atrophy in this case had been quite extensive.

I have so often seen a strange relationship between nasal and ocular diseases and it has put me on my guard. What the outcome is going to be can only be told in later years. We must swing with the pendulum. The present swing of the pendulum will give us a better knowledge of these diseases.

Dr. Norval H. Pierce (closing the discussion on his part):—At the Illinois Eye and Ear Infirmary, where doubtful cases are referred from the eye to the ear, nose and throat side, it is very rarely found that there is any connection between the eye symptoms and nasal disease. It is only with the greatest rarity that we find anything in the nose to account for the patient being referred to our side. There is, of course, a well-defined relationship between inflammatory diseases of the sinuses and the orbit. Neuritis following diseases of the posterior ethmoidal cells and of the sphenoidal sinuses is a very well-marked condition. The reflex conditions are about the only ones that can enter into doubt, and I believe that it is wise to preserve extreme conservatism regarding these cases, in order to prevent much unnecessary surgical work. Headaches caused by sinus trouble produce pain in the eye if the posterior ethmoidal and the sphenoidal cells are involved. Of course, headache may be caused by disease of the frontal and maxillary sinuses. It is dangerous to say that a sinus is diseased without external symptoms, that is, without pus coming from the region of the sinus. That there is a so-called occult or closed empyema, especially of the ethmoidal cells, no one will doubt, but these cases must be extremely rare, and the diagnosis can only be made on removing the middle turbinate body, and perforation of the ethmoidal labyrinth.

Dr. Henry Gradle (closing the discussion):—How frequently association of sinus disease and ocular diseases occurs can only be learned by clinical research in all cases of eye disease of uncertain etiology. We are now at the threshold of our studies in this connection. A one-sided headache, photophobia and uncomfortable sensation around the eye may all result from nasal conditions, but only as symptoms referred to the eye, and not as the expression of changes in the eye. Few cases of actual organic changes in the eye have been recorded in the literature. Of all cases of lacrimal diseases, more than 90 per cent. are due to extension from the nose, and less than 10 per cent. are due to a descending infection

from the conjunctiva. In orbital inflammation the extensive studies of Birch-Hirschfeld have shown that fully 60 per cent. of the cases are of nasal origin, possibly more if the nose had been examined thoroughly. Orbital diseases are not common. How many instances does the most industrious colleague see in his private practice during the year? In cases of optic nerve diseases it has become the fashion to attribute many of these affections to sinus involvement. A few cases have been reported where an operation proved decidedly effective, where the sinus was opened and found diseased, and when operation produced a cure of the eye affection. Such instances are rare, however.

I have not seen a single case of optic nerve inflammation following sinus disease. The few cases in the literature of intraocular diseases attributed to sinus lesions are generally not above suspicion. The four cases I have mentioned I collected from my own experience, dating back as far as seventeen or eighteen years. In two cases it was a coincidence, in which I can not say whether the sinus disease really caused the eye disease. In one case there was sufficient proof from the fact that the disease began to recede at once as soon as drainage was established, previous treatment having been without avail. Personally, I declare myself very much in favor of the comparative rarity of sinus affections as causes of extra- or intraocular disease; but such cases do occur, and it is the duty of the oculist to examine the nose in every doubtful instance, keeping in mind the possible connection between the eye and the accessory sinuses of the nose.

#### FOX RIVER VALLEY MEDICAL ASSOCIATION.

A regular meeting of the Fox River Valley Medical Association was held at the home of the Fox River Country Club at Geneva, Feb. 2, 1909. Thirty-five members and visitors were present. The morning paper, "Surgery of the Gall Bladder," was by Dr. Weller VanHook of Chicago, and was demonstrated on a freshly killed pig. A most effective dinner was served by the Country Club and at 2 p. m. Dr. Joseph Miller of Chicago lectured on "Some Heart Affections Not Due to Valvular Lesion." Drs. A. R. Reeder, C. W. Morrow and W. A. Uehren were admitted to membership.

#### MACOUPIN COUNTY.

The regular quarterly meeting of the Macoupin County Medical Society was held in the Masonic Reading Room at Carlinville, Jan. 26, 1909. The following members were present: From Carlinville: Drs. J. Palmer Matthews, Collins, Denby, Fisher, Corr, Davis and Bell. From Gillespie: Drs. King and Gross. From Benld: Drs. Renner and Pattison. From Virden: Dr. E. G. Motley. From Nilwood: Dr. Morgan. The minutes of the last meeting and the treasurer's report for the quarter were read and approved. The president and secretary were instructed to write to our congressman urging support of the movement for a National Department of Public Health; also to write to our state representatives urging them to support legislation that will give the state adequate registration of births and deaths, such as will be acceptable to the Bureau of the U. S. Census. The resignation of Dr. M. H. Farmer from active membership on account of ill health was accepted and his name placed on the honorary list.

The following resolutions were adopted:

#### RESOLUTIONS OF RESPECT.

WHEREAS, It pleased the Ruler of the Universe to remove from this life one who was a charter member of our society, Dr. John Pitt Matthews; therefore be it

*Resolved*, That we hereby express our appreciation of the work he has done for this society and the medical profession in his well-spent life.

Of his professional work and attainments we need not speak; his papers, debates and discussions in this society which the members have heard during his

connection with it speak for his experience and learning more than words of ours will do.

He was ever faithful to the interests of the profession and this society, shirking none of its labors and responsibilities and we are pleased to know that he shared in its honors, serving as our local president and being chosen from among us as president of the Illinois Medical Society. He always urged medical organization.

We will do well to emulate his devotion to his profession and strive to attain his ideals. We beg to extend the sympathy of our society to his bereaved family. Respectfully submitted,

WILLIAM M. GROSS,  
L. H. CORR,  
J. S. COLLINS.

### MORGAN COUNTY.

The society held its regular meeting at the Public Library in Jacksonville February 11, at 8 p. m. Members present: Drs. Black, Day, Duncan, Gailey, Hairgrove, Hardesty, Milligan, Norris, Pitner, Stacy and Woltman. On account of the absence from the city of the president, Dr. Charles Cole, Dr. T. J. Pitner was chosen temporary chairman. "Fractures of the Upper Part of the Femur" was the subject for consideration and was presented under these topics: "Differential Diagnosis," Dr. W. P. Duncan; "Treatment," Dr. F. A. Norris; "Medico-legal Aspects," Dr. P. C. Thompson. Dr. J. W. Hairgrove led the discussion.

GEORGE H. STACY, Secretary.

### STEPHENSON COUNTY.

The Stephenson County Medical Society met at the courthouse in Freeport, Thursday, Jan. 14, 1909. The following members were present: Drs. Arnold, Burns, Clark, Kober, Leitzel, Lius, Morrison, Moore, Peck, Salter, Stealy, Smith, Snyder, Thompson and Torey. Dr. G. E. Mershon of Mt. Carroll was a visitor. A change in the constitution was effected, making the fiscal year end December 31 so as to comply with the state organization. Dr. A. E. Smith, who attended the International Congress on Tuberculosis, gave an interesting report of that meeting.\* Dr. W. B. Peck gave an interesting account of his experiences in the Vienna and Berlin medical clinics. Dr. V. F. Snyder gave a report on his personal experiences in the use of various tuberculin reactions.

The Physicians' Club of Freeport met Thursday evening at the courthouse, at which meeting an election of officers was held resulting as follows: President, Dr. A. E. Smith; vice-president, Dr. B. A. Arnold; treasurer, Dr. R. J. Burns; secretary, Dr. E. H. Best. It is the purpose of the organization to hold monthly meetings and take up a regular line of study. Steps are being taken to secure permanent quarters for the sessions. Members present were: Drs. Arnold, Best, E. H. Burns, Clark, Moore, Morrison, Mease, Rideout, Rosensteil, Stealy and Snyder.

### VERMILION COUNTY.

*Meeting of Jan. 11, 1909.*

The regular monthly meeting of the Vermilion County Medical Society was held on Jan. 11, 1909. The following officers were elected at the December meeting for the year 1909: President, Dr. S. C. Glidden, Danville; vice-president, Dr. R. S. McCaughey, Hoopston; secretary-treasurer, Dr. George Stealy, Danville; delegate, Dr. E. B. Cooley, alternate delegate, Dr. Benjamin Gleeson, Danville; censors, Drs. A. M. Miller and Rachel Cooper; program committee, Drs. Glidden, Sol. Jones and Gleeson; committee on public health and legislation, Drs. Clark, F. N. Cloyd and L. B. Russell.

\* For report see page 303.

The program for the evening of Jan. 11, 1909, was very interesting and instructive, and included a stereopticon lecture and talk by Dr. Emil G. Beck of Chicago, Ill., on "Bismuth Paste Injection of Tuberculous Sinuses, Fistulas and Abscesses," giving the methods used and the results of treatment of his many cases with this new method, of which he was the originator. The night was a very disagreeable one for good attendance, but nevertheless thirty-one members were present.

Dr. R. D. Cruikshank presented a paper on "Tuberculosis of Bones and Joints," and Dr. W. A. Cochran gave a brief talk on "Tuberculosis from the Opsonic Standpoint," more from his own observations. Both of these papers were very interesting and enjoyed by all present.

The Board of Censors reported favorably on the name of Dr. H. E. Baldwin of Sidell, Ill., and he was elected to membership in this society. The members present were: Drs. Gleeson, Guy, Miller, Kingsley, M. Downs, Sims, Williams, McIntosh, Cooper, Fithian, Cochran, Dale, G. M. French, Solomon Jones, Leo Fairhall, Hatfield, Barton, F. N. Cloyd, Michaels, Reagan, Cruikshank, Crist, Cooley, E. E. Clark, Fisher, Steely, Glidden, Clements, Current, Wilkinson.

#### *Meeting of Feb. 8, 1909.*

The regular monthly meeting of the Vermillion County Medical Society was held at the City Hall on Feb. 8, 1909. It is the plan of the program committee to arrange with special men from other cities for a place on the program of each monthly meeting during the year. Thus far, several good men have signified their willingness to give us papers on special subjects, and it will be a great treat to our society members to hear these men each month. At the January meeting we had with us Dr. Emil G. Beck of Chicago, and at the February meeting Dr. C. U. Collins of Peoria who addressed us on the "Evolution of the Abdominal Incision." Dr. Collins' paper was very original, as he has a special incision of his own for entering the abdomen, and, in presenting his incision, he gave us the anatomy of the abdominal wall, the history of other incisions and their advantages and disadvantages. A vote of thanks was given Dr. Collins for presenting his excellent paper to the society.

Dr. R. L. Hatfield of Danville was next on the program, who took for his subject a "Report of a Case of Banti's Disease." This paper was very interesting and the case worked up from a scientific standpoint.

The next paper of the evening was by Dr. Charles E. Wilkinson of Danville on "Fibromyoma, Complicated by Pregnancy." Dr. Wilkinson handled this subject in a very thorough manner. He gave various statistics concerning this subject, at the same time giving his own experiences and showing specimens of his various cases.

The discussion of the three papers was opened by Dr. A. Merrill Miller of Danville and Dr. R. S. McCaughey of Hoopeston. After a thorough discussion of the papers, Dr. R. S. McCaughey presented a patient with "Lichen Planus," the disease following an injury received by a railroad spike.

The Board of Censors reported favorably on the names of Dr. C. H. Evans, Danville, and Dr. A. M. Eare of Hoopeston, and they were then elected to membership in the society. Members present were: Drs. Hatfield, Cruikshank, Michael, Wilkinson, Russell, Clark, Hoffman, R. N. Cloyd, Crist, Leo Fairhall, Fithian, Glidden, Guy, Steely, Clay Gleeson, Dale, F. N. Cloyd, Mason, Cooper, Miller, McCaughey, Tenney, M. Dowus.

GEORGE STEELY, Secretary.

#### WABASH COUNTY.

The regular meeting of the Wabash County Medical Society was held Jan. 26, 1909, at 3 p. m., at Dr. Mercer's office, Mt. Carmel. The meeting was called to order by President Dr. C. E. Gilliatt. The minutes of the regular meeting Oct. 27, 1908, and of special meeting Dec. 21, 1908, were read and approved. Dr.



C. E. Gilliatt read a very interesting and instructive paper on "The Differential Diagnosis of Gastric Ulcer and Carcinoma." Dr. J. J. McIntosh led in the discussion of "Gastric Carcinoma," and was followed by all present and reports of cases occurring in the practice of each.

The attendance was small, but all felt fully repaid for the time given up for the meeting.

## THE DIFFERENTIAL DIAGNOSIS OF GASTRIC ULCER AND CARCINOMA.

C. E. GILLIATT, M.D., ALLENDALE, ILL.

The differential diagnosis between ulcer and carcinoma of the stomach is in some cases simplicity itself; in others it is replete with difficulty. In the first place, let us consider the value of age and sex as etiological factors in diagnosis. This is a question which can be solved only by the statistical method. And here we are on safe ground. The relative frequency of gastric ulcer in men and women according to the reports of the Westminster Hospital from 1884 to 1900, a period of seventeen years, shows that of 397 cases of gastric ulcer seen in the wards, 69 were in men and 328 in women. Welch, as the result of 1,699 cases of gastric ulcer, met with at autopsy, found that 40 per cent. were in men and 60 per cent. in women. Fenwick, St. Mary's Hospital, out of 383 cases, found 95 in men and 288 in women. Lebert, of 209 cases diagnosed during life, found 47 in men and 162 in women. Habershon out of 201 cases, found 74 in men and 127 in women. Martin, from the records of 171 cases, gives 27 in men and 144 in women. Anderson, of 35 cases found 3 in men and 32 in women. Tabulating these results we get the following figures:

Welch (number of cases).....	1,699; men, 680; women, 1,019
Murrell (number of cases) .....	397; men, 69; women, 327
Fenwick (number of cases) .....	383; men, 95; women, 288
Lebert (number of cases) .....	209; men, 47; women, 162
Habershon (number of cases).....	201; men, 74; women, 127
Martin (number of cases) .....	171; men, 27; women, 144
Anderson (number of cases).....	35; men, 3; women, 32

This gives a ratio of one man to two and a fraction of women. Now, let us employ the same method of investigation with regard to age.

The following is the observation of age as the result of the analysis of the 397 Westminster cases:

Under 5 years .....	0	30 to 40 years .....	104
5 to 10 years .....	2	40 to 50 years .....	32
10 to 20 years .....	62	50 to 60 years .....	10
20 to 30 years .....	182	Over 60 years .....	50

Welch gives the following tables of 607 cases collected from hospital statistics:

1 to 10 years .....	1	60 to 70 years .....	84
10 to 20 years .....	32	70 to 80 years .....	35
20 to 30 years .....	119	80 to 90 years .....	6
30 to 40 years .....	107	90 to 100 years .....	0
40 to 50 years .....	114	Over 100 years .....	1
50 to 60 years .....	108		

Martin, in his table, distinguishes between males and females, but by adding the cases together, we get the following figures:

Under 20 years .....	15	40 to 50 years .....	25
20 to 30 years .....	75	50 to 60 years .....	14
30 to 40 years .....	38	Over 60 years .....	4

Fenwick differentiates between acute and chronic ulcers, but by his table we arrive at the following conclusions:

10 to 20 years .....	9	50 to 60 years .....	12
20 to 30 years .....	17	60 to 70 years .....	6
30 to 40 years .....	16	70 to 80 years .....	1
40 to 50 years .....	28		

By combining the results we get the following table:

Under 20 years .....	121	40 to 50 years .....	199
20 to 30 years .....	393	50 to 60 years .....	144
30 to 40 years .....	265	Over 60 years .....	142

This gives the preponderance of cases in the decade 20 to 30 years, which is in accordance with the view commonly held. Let us apply the same mode of investigation to carcinoma.

In the Westminster Hospital in the seventeen years 1884 to 1900, there were 92 cases in the wards, and of these 60 were in men and 32 in women. A ratio of 2 to 1. Reiche reports the statistics at Hamburg, 1872 to 1898, and finds that of 4,237 deaths from cancer of the stomach, 2,387 were in males and 1,850 in females. Welch, of 2,214 cases collected from hospital statistics, and nearly all confirmed by autopsy, gives 1,233 males and 981 females. Osler and McRae, out of 151 cases, gives 126 in males and 24 in females. A proportion of 5 to 1. Martin found in 53 cases, 32 in men and 21 in women. Combining the numbers we get:

Welch (number of cases).....	2,214; men, 1,233; women, 981
Reiche (number of cases) .....	4,237; men, 2,387; women, 1,850
Osler and McRae (number of cases).....	150; men, 126; women, 24
Murrell (number of cases).....	92; men, 60; women, 32
Martin (number of cases).....	53; men, 32; women, 21
Sum total gives a ratio of 6 to 5.	

Brinton thought that gastric cancer was twice as often in men as in women, but Welch, with his larger statistics, places the ratio at about 5 to 4, and considers the difference so slight that no importance can be attached to it.

The age of which gastric carcinoma occurs in 92 cases in Westminster Hospital, there was no patient under the age of 30.

In the decade 30 to 40, 11 cases.

In the decade 40 to 50, 33 cases.

In the decade 50 to 60, 25 cases.

And over 60, 23 cases.

Reiche collected 600 cases from various sources, but does not tabulate the results. He states that the average age of death was 50, and that the maximum number of cases, 162, or 2/7, occurred between 50 and 60. Both Welch and Reiche have published series of cases, and from their series of cases it will be seen the majority of cases occur between the ages of 50 and 60. The conclusions at which we arrive are that gastric ulcer is from two to three times as common in women as it is men. And that it is most frequent between the ages of 20 and 30 years. On the other hand, gastric cancer is slightly more common in men and the majority of cases occur over the age of 50. Although statistics are a great aid, the ultimate decision in any particular cases must be based on a consideration of the symptoms presented by the individual patient. It is very difficult at times to tell whether the cancer or ulcer is in the pylorus, lesser curvature, cardia or in the posterior or involves the whole stomach.

The pain of gastric ulcer is always very severe, and is described as burning, boring or gnawing in character, and in the more characteristic forms comes on in intense paroxysms.

Pain is not only felt in epigastrium, but radiates to back and sides. In many cases the two points of epigastric pain and dorsal pain, about the level of dorsal vertebra, are very well marked. Pain is always increased by pressure, and many patients suffering from this malady have to discard the use of corsets. It is also increased by taking food and relieved by vomiting. The intensity of the pain is increased by posture, and Brinton thought the decubitus afforded the best indications of the lesion, although this is not the case.

The pain of cancer is less severe in character, and there are fewer intervals during which no pain is felt in the epigastric region. The areas of skin tenderness are referred, as Head has shown, to the region between the nipple and the umbilicus in front and behind from the fifth to the twelfth thoracic spine. The appetite is almost invariably poor. Brinton records a case of an inveterate smoker, who suddenly developed a distaste for tobacco. There were no definite signs, but a diagnosis of carcinoma was made, and this turned out to be correct. In gastric ulcer the appetite is not impaired, although the patient abstains from eating on account of the pain which food engenders.

Vomiting in gastric ulcer comes on soon after a meal, and affords relief to the pain. In cancer it occurs, not after meals, but once or twice a day, or at longer intervals, the quantity evacuated being considerable. Hare says vomiting due to gastric ulcer is preceded by pain, and is generally brought on by taking food and so occurs soon after eating. The food, therefore, is only slightly digested and evidences of fermentation are absent to a great extent. If blood is present it is nearly always bright red and in considerable quantity, and indicates that a hemorrhage has recently taken place from the surface of an ulcer. The vomiting of gastric cancer at first consists of particles of food, mucus, water and sometimes bile. The vomit may be tasteless or sour from fermentation and may have an offensive odor from similar cause. Often it contains blood, either in bright red streaks or as a brownish red fluid, or in similar colored clots, which may be brown when they have been in the stomach for some time. Often the exuded blood changed by mixture with the stomach contents looks like coffee grounds. This coffee-ground vomit is not pathognomonic of gastric cancer, but is very characteristic of this disease. There are numerous other causes of vomiting of blood than gastric ulcer or cancer.

In ulcer the hemorrhage is distinctly intermittent, and after one considerable evacuation there may be no more bleeding for some time. In cancer large quantities of blood are rarely vomited, although it may frequently occur, often only after short intermission. Flatulence is common in both conditions, but in gastric ulcer the flatus has no offensive odor, while in cancer it is extremely disagreeable. The tongue in gastric ulcer varies much in appearance; it is often red, clean and moist, but when there is marked anemia it is pale and flabby. In cancer it is covered with a thick fur. Probably the most important diagnostic fact is the presence or absence of an abdominal tumor. In gastric ulcer there is no tumor, although there may be a thickened pylorus, the result of the formation of cicatricial tissue from the healing of previous ulcers, may be detected. In cancer the tumor is much more evident; it is frequently palpable, presenting an uneven surface, and is movable and painful on pressure.

Many physicians do not make a diagnosis of cancer unless a tumor can be detected, but this is going too far, for a tumor may not be palpable during life, even in a hot bath, owing to the fact of its being adherent to the under surface of the liver. The detections of secondary deposits in the liver, or any other organ or any of the glands, except the salivary glands, would point to malignant disease. The facial aspect may aid in a differentiation; in gastric ulcer the patient is usually anemic; in cancer there is a drawn anxious look, the result of much suffering.

Chemical examination of the vomited matter not uncommonly affords valuable evidence; in gastric ulcer, hydrochloric acid is usually present and no lactic acid is to be found; in cancer the hydrochloric acid is usually absent and lactic acid may be present. Much importance has been attached to the discovery of the *Oppler* bacillus in the vomited matter, and although not pathognomonic of cancer, its presence is always very suspicious. In fifty-six cases on record of gastric carcinoma, it was detected in all but three. In addition to the bacillus, there may be tissue fragments of the neoplasm.

For convenience of reference, these facts are arranged in tabular form:

	Ulcer.	Cancer.
1. Sex .....	More frequent in women....	Slightly more common in men.
2. Age .....	20 to 30 years.....	Over 50 years.
3. Facial expression	Fresh or may be cachectic...	Sallow; marked cachexia; drawn look, expressive of much suffering.
4. Temperature .	Slightly febrile.....	Often subnormal.
5. Tongue .....	Red, clean and moist, or pale and flabby.	Thickly coated.
6. Appetite .....	Not impaired, but patient afraid to eat on account of pain.	Always bad.

7. Epigastric pain.	Severe, worst after meals; Constant.	
8. Flatulence	.... None or not offensive.....	Frequent and with fetid odor.
9. Vomiting	.... After meals .....	Once or twice a day or longer intervals. Often in large quantities.
10. Hematemesis.	4 Profuse bright red.....	Small in quantity; coffee ground, often offensive.
11. Vomit water..	HCl increased; lactic acid absent.	HCl absent; lactic acid present; Oppler boas bacillus.
12. Urine	..... Small in amount; contains indican.	Contains indican and acetone.
13. Tumor	..... None or only thickened pylorus.	Palpable, uneven, painful on pressure.
14. Duration	.... Indefinite .....	6 to 12 months.

#### WAYNE COUNTY.

The Wayne County Medical Society met at Dr. Walters' office in Fairfield, Thursday, Jan. 21, 1909, President W. M. Johnson in the chair. The session was called to order promptly at 10 a. m. Members present were Drs. W. M. Johnson and C. E. Johnson of Johnsonville, J. L. Young of Rinard, C. O. Truseott of Cisne, B. E. Garrison of Wayne City and N. J. Hall, T. J. Hilliard, W. C. Sibley and J. P. Walters of Fairfield.

This was the annual meeting, and the time for the election of officers for the ensuing year, but it was decided that this and some other business pertaining to the welfare of the society should be deferred to next meeting so the entire time could be devoted to the program of the day. The following is the program:

"Up-to-date Treatment of Acute Lobar Pneumonia," Dr. C. O. Truseott. Reviewed by Dr. J. D. Harlan. "Differential Diagnosis and Treatment of Bronchopneumonia in Children," Dr. J. E. Dixon. Reviewed by Dr. T. J. Hilliard, "Differential Diagnosis and Treatment of Follicular Tonsillitis," Dr. C. W. Sibley. Reviewed by Dr. N. J. Hall. "Diagnosis and Treatment of Erysipelas," Dr. J. P. Walters." Reviewed by Dr. C. E. Johnson.

Dr. Truseott led off on the subject assigned him. It is presumed that every member of the society can diagnose a case of pneumonia, so he was limited to the treatment of this disease. He contrasted the methods of to-day with that of former years, showing the advantages and disadvantages of each. The method of to-day is more conservative than formerly, in the days of bleeding, sweating and large doses of calomel and other drugs. His reviewer not being present, opportunity was given to all present to comment on the subject as treated by Dr. Truseott, and a general discussion of the subject was kept up to near the noon hour. The importance of this subject will be more appreciated when we consider the fact that pneumonia causes the death of more people in Southern Illinois than any other disease.

The secretary then read a paper on the subject assigned him, after which the society adjourned to meet promptly at 1 o'clock.

The society met as per adjournment, the paper read by the secretary was reviewed by Dr. C. E. Johnson. The review of the paper and the general discussion of the subject was continued to the time the physicians out of town had to take their trains home.

Adjourned to meet in Fairfield, April, 1909.

J. P. WALTERS, Secretary.



## NEWS OF THE STATE.

### PERSONAL.

Dr. and Mrs. Milton E. Eisenstadt, of Chicago, have returned from Europe.

Dr. Spencer S. Fuller, Paxton, sailed for Vienna, via the Mediterranean, on February 9.

Dr. J. A. Hoffman, of Pesotum, Ill., has returned from a course of study in Vienna, Austria.

Dr. Philip H. Hesse, interne at the Illinois Northern Hospital for the insane, Elgin, has resigned.

Dr. Albyn L. Adams, Jacksonville, vice-president of the trustees of the Passavant Hospital, has resigned.

Dr. A. H. Geiger, 110 Clybourne Avenue, Chicago, has returned from Europe and will resume his practice.

Dr. C. E. Kelso, of Champaign, Ill., has become a member of the Champaign County Medical Society.

Dr. Max F. Clausius, formerly of Jefferson Park, has been appointed physician of the Siletz Agency, Siletz, Ore.

Dr. Jesse M. Monan, Chicago, has recently returned, after eleven years spent as a medical missionary in Persian Kurdistan.

Dr. E. V. L. Brown, Chicago, who has been studying with Professor Fuchs in Vienna for a period of five months, has returned home.

Dr. William D. Hohman has been elected president, Dr. Francis O. Lowe, vice-president, and Dr. H. Nelson Heflin secretary of the staff of St. Francis Hospital, Kewanee.

Dr. and Mrs. Alexander H. Ferguson, of Chicago, are visiting their old home in Winnipeg, where Dr. Ferguson is to address the alumni of the Medical Department of the University of Manitoba.

Dr. Robert D. Luster, formerly of Granite City, Ill., has returned from abroad and opened offices in 1201-2 Venetian Building, Chicago. Practice will be limited to x-ray diagnosis and treatment.

Dr. A. Jordan, for several months past house physician at the Rockford Hospital, resigned his position January 24 and has gone to Hudson, S. D., where he will take the practice of a well-known physician.

A first aid legion on military basis is to be organized by the Illinois Branch of the American National Red Cross Society. Dr. Gustavus M. Blech has been appointed director-in-chief, and Dr. Louis L. McArthur chairman of the executive committee.

The annual meeting of the stockholders of the Chicago Eye, Ear, Nose and Throat College was held recently. The old board of directors, consisting of Drs. Wm. A. Fisher, A. G. Wipperfurth, H. W. Woodruff, Thomas Faith and J. R. Hoffman, were re-elected. The college is entering upon the thirteenth year of its existence, and reports of the officials show a very satisfactory condition of the college and hospital.

## NEWS ITEMS.

In the recent entertainment given at the Colonial Theater, Chicago, for the benefit of the Chicago Charity Hospital, over \$1,500 was netted.

An examination for chief of the medical staff of the Dunning institutions was held March 2 and 3 at the Cook County Building, Chicago. The salary is \$2,500, with board, room and washing.

In the Franklin County Circuit Court, in Benton, February 2, Dr. Benjamin F. Brayfield, Mulkeytown, was exonerated of the charge of causing the death by poison of Reuben F. Parrish, of that place.

In the suit for \$25,000 damages brought by Edward L. O'Neil against Dr. Lars P. Jacobson, Kankakee, in which malpractice in a case of varicocele was claimed, the jury is said to have rendered a verdict in favor of the plaintiff and awarded \$400 damages.

The Practitioners' Hospital has changed its name to Abraham Lincoln Hospital. Dr. Michael Goldenburg, 72 East Madison Street, director of clinics in the dispensary attached to the hospital, announces that there are eight vacancies on the staff.

The following officers were elected at the annual meeting of the Chicago Tuberculosis Institute: Dr. Henry B. Favill, president; Drs. Frank Billings and Robert H. Babcock, vice-presidents; David B. Forgan, treasurer; Sherman Kingsley, secretary. Traveling tuberculosis exhibits are the latest announcements of the institute.

Lake County Tuberculosis Institute, four miles north of Waukegan, which was started in July last, now has a capacity of eighteen in winter and thirty in summer. Organization of the institution was effected September 3. Dr. John C. Foley is president, Dr. William C. Bouton, secretary, and Dr. W. H. Watterson, manager-treasurer and physician.

Dr. Douglas Argyll Robertson, famed throughout the world on account of the pupillary phenomenon bearing his name, died recently at Gonda, India, aged 71. He was formerly lecturer on diseases of the eye at the University of Edinburgh, and was an ex-president of the Ophthalmological Section of the British Medical Society. At the time of his death he was honorary surgeon-oculist to the king.

Dr. J. A. Womack, of Karbers Ridge, Hardin County, Ill., is a member of the State Senate and has been appointed a member of the committee on charitable, penal and correctional institutions. As Dr. Womack has been a member of the Medical Legal Committee of the state society from his (Hardin) county he will undoubtedly be able to do good service on this and other committees to which he may be appointed.

Declaring certification of milk in Chicago a failure, the Chicago Medical Society has appointed a milk commission, consisting of Drs. Isaac A. Abt, Marcus P. Hatfield, Frank S. Churchill, James W. Van Derslice, Charles S. Bacon and Samuel J. Walker, to take charge of certified milk and furnish labels to dairies that have complied with regulations. The commission will appoint a physician whose duty shall be to look after and testify to the health of employes of every dairy whose milk is to be certified. A chemist and bacteriologist will also be appointed to examine the milk.

Darwin anniversary addresses are being given under the auspices of the Biological Club of the University of Chicago. The lectures are open to the public, and the following are the remaining lectures of the courses: March 3, "The Influence of Darwinism on Psychology," Prof. J. R. Angell; March 4, "The Theory of Individual Development," Prof. F. R. Lillie; March 10, "The Evolution of Religion," Prof. Shailer Mathews; March 11, "Darwinism and Experimental Methods in Botany," Prof. D. T. MacDougal; March 17, "Evolution in Language and in the Study of Language," Prof. C. D. Buck; March 18, "Selection, Mutation, and Orthogenesis," Prof. C. O. Whitman.

The third congress of the American School Hygiene Association was held in Chicago, February 22 to 25. The meeting was held with that of the Division of School Superintendents of the National Education Association. On the first day there was a meeting of the executive committee and the council. On February 23 the president, Dr. Henry P. Walcott, chairman of the Massachusetts State Board of Health, delivered his annual address, and the Committee on the Status of Instruction in Hygiene in the Schools and Colleges of America made its report, and during the three active days of the meeting many papers were presented by prominent educators and professional men dealing with school hygiene, prophylaxis and medical inspection.

The physicians of Elgin, Ill., to the number of twenty-six, have signed an agreement to limit their evening work, in the following language:

ELGIN, ILL.

We, the undersigned physicians of Elgin, believing it to be unnecessary to be in our offices more than three evenings each week; that to ourselves and our families we owe more of our time than we are able to give under present arrangement of office duties; and believing also that we are entitled to some recreation ourselves, and respite from professional duties (thereby making our work more efficient); and believing that a curtailment of evening office hours will in no way work a hardship or an inconvenience to the citizens of Elgin, do hereby agree to observe evening office hours on Tuesday, Thursday and Saturday evenings only throughout the year (special appointments excepted). Signed:

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#### MEDICAL SOCIETY NOTES.

The Winnebago County Medical Society elected the following officers at their meeting, January 12: President, Dr. F. H. Kimball; vice-president, Dr. W. Grant Hatch; secretary, Dr. F. W. Hanford; censor, Dr. Howells, Winnebago.

At a recent meeting of the South Chicago Branch of the Chicago Medical Society plans were discussed for holding a charity ball for the purpose of raising funds for the benefit of the new South Chicago Hospital, located at 739 Ninety-second Place, which has been recently dedicated. The hospital was built at a cost of \$25,000.

The annual meeting and dinner of the Chicago Laryngological Society was held at the Calumet Club on January 26. The following officers for the ensuing year were elected: President, Henry Gradle;

vice-president, Charles M. Robertson; secretary-treasurer, F. Gurney Stubbs; councilors, A. H. Andrews, J. G. Wilson and Elmer L. Kenyon; councilor to the Chicago Medical Society, Arthur M. Corwin.

The Chicago Medical Society has announced a joint meeting to be held March 31, 1909, with the American Pharmaceutical Association. The *Bulletin* of the Chicago Medical Society for February 20 gives the following announcement: "The ninth decennial revision of the Pharmacopeia is approaching. It is time that the active minds of the profession turn their attention to the question, How can our Pharmacopeia be improved? Heretofore the medical profession has taken but a lukewarm interest in the Pharmacopeia and its revision. The pharmacists deserve the credit for having been most active in its elaboration, while physicians have been most active in criticizing the Pharmacopeia after its revision. Now, why can we not have the practitioners' criticisms before the revision? This is what such meetings as the one to be held on March 31 ought to accomplish. What has perhaps kept physicians from taking as much interest in the pharmacopeial revisions as they might reasonably be expected to is the feeling that they have no share in the work and no influence in directing it. Nothing can be further from the truth. At the meeting announced it is expected that five of the twenty-five of the committee of revision will be present. They are to act as your representatives. They are anxious to receive your criticisms and your suggestions. It is intended that this meeting be especially devoted to a discussion of principles that are to govern the forthcoming revision. Therefore, if you have anything to offer for the improvement of the Pharmacopeia be sure to attend this meeting. If you have nothing to offer, come and hear what others have to say on this subject, so that you may at least have been present at a discussion that will influence the framing of this work. In that way you, as a physician, may feel that the Pharmacopeia is your Pharmacopeia."

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#### PUBLIC HEALTH.

Scarlet fever has been reported at Marseilles, Ill.

Scarlet fever has been threatening at Mattoon, Ill.

Scarlet fever has been reported as epidemic at Aurora.

Measles have been reported at Silvis, Hopkins and Winsip.

Several cases of typhoid fever have been reported in Evanston.

Diphtheria has been reported at the Anna Milliken Home at Decatur.

Several schools in Union County have been closed on account of diphtheria.

The schools at Lane, Ill., have been closed on account of an epidemic of scarlet fever.

Smallpox is reported at Farmersville, Rushville, Grant Park, Kingston and Groveland Township.

The Washington Grove School at Kellerville was closed on account of the threatened epidemic of scarlet fever and diphtheria.



At Pekin strict quarantine has been maintained on account of an epidemic of smallpox. Canton has also been threatened with the epidemic.

The Danville Physicians' Club, recently organized, has elected the following officers: President, Dr. Charles F. Wilkinson; vice-president, Dr. A. Merrill Miller; secretary-treasurer, Dr. Benjamin Gleeson.

At Cairo, Ill., the board of education has been enforcing the vaccination regulations against all children who attend the schools. The board can not compel vaccination, but it can prevent the attendance of children who are not vaccinated.

The Illinois State Board of Health has published in their *Bulletin* of November, 1908, a register of physicians outside of Chicago, giving the name, state medical society to which they belong, address, college of graduation, year of graduation and year of license to practice in Illinois.

Smallpox has been reported in the following counties: Alexander, Champaign, Christian, Clinton, Franklin, Fulton, Jackson, Jasper, Kan-kakee, Macon, Macoupin, Marion, Mason, Massac, Mercer, Montgomery, Peoria, St. Clair, Sangamon, Stevenson, Tazewell, Union, Vermilion and Williamson.

At the annual meeting of the Brainerd District Medical Society, held at Petersburg, January 28, Dr. John M. Wilcox, Clinton, was elected president, Dr. Don W. Deal, Springfield, vice-president, and Dr. Harry S. Oyler, Lincoln, secretary. The next meeting of the society will be held in April at Lincoln.

The *Bulletin* of the Department of Health in Chicago makes the following report for the month of January: During the month of January 2,697 deaths were reported to the Bureau of Vital Statistics. This total yields a per annum rate of 14.28 per 1,000 of population, the second lowest rate ever recorded in this city during January. The lowest January rate previously recorded was 13.88 in 1898. The total reported deaths were 399 less in January a year ago, but they exceed the reports of December by 249. As compared with January 1908 there were 311 fewer deaths from the impure air diseases—pneumonia, bronchitis, influenza and consumption; 6 fewer from the acute contagious diseases; 17 fewer from typhoid fever; 63 fewer from the nervous diseases, and 8 fewer from the diseases of the heart. There were increases from the diarrheal diseases, apoplexy, violence and Bright's disease.

Statement of Mortality: Deaths reported during the month of January, 1909, compared with the reported deaths of the preceding month and with the reported deaths of the corresponding month of 1908. Death rates computed on United States Census Bureau's figures of midyear populations—2,224,490 for 1909, 2,166,055 for 1908.

	Jan. 1909	Dec. 1908	Jan. 1908		Jan. 1909	Dec. 1908	Jan. 1908
Total deaths, all causes .....	2,697	2,448	3,096	Diarrheal diseases ..	163	149	149
Annual death rate per 1,000 .....	14.28	13.31	16.83	Under 2 yrs. of age ..	138	126	130
Sexes—				Over 2 yrs. of age ..	25	23	19
Males .....	1,496	1,349	1,704	Tuberculosis—all forms .....	332	270	362
Females .....	1,201	1,099	1,392	Of lungs .....	284	239	312
By color—				Other forms .....	48	31	50
White .....	2,605	2,383	3,000	Cancer .....	125	141	127
Colored .....	92	65	96	Nervous dis.—total..	76	72	137
Ages—				Convulsions .....	4	4	24
				Menigitis, simple ..	17	19	28

	Jan. 1909	Dec. 1908	Jan. 1908		Jan. 1909	Dec. 1908	Jan. 1908
Under 1 year.....	563	455	599	Other nervous dis.	55	49	85
Between 1 and 5 years	232	220	254	Heart diseases.....	224	260	232
Between 5 and 20 yrs.	164	159	189	Apoplexy .....	62	55	39
Bet. 20 and 60 years.	1,138	1,030	1,317	Bronchitis—total ...	81	59	118
Over 60 years.....	600	584	737	Acute .....	76	56	104
By important causes—				Chronic .....	5	3	14
Diphtheria .....	69	87	61	Nephritis (Bright's			
Scarlet fever .....	52	58	60	disease) .....	195	177	191
Measles .....	11	12	13	Violence—all forms..	183	177	155
Whooping cough ....	4	4	8	Suicides .....	46	34	48
Influenza .....	18	13	192	Accidents .....	119	135	93
Typhoid fever .....	22	28	39	Manslaughter .....	18	8	14
Pneumonia .....	500	361	570	All other causes.....	580	525	643

The North Shore Branch of the Chicago Medical Society passed the following resolutions and the same have been passed by some of the other branches of the society:

WHEREAS, We, the members of the North Shore Branch of the Chicago Medical Society, are not in any sense opposed to the giving of medical services to the worthy and deserving poor by the members of the profession individually, in free dispensaries, hospitals or clinics, but we are certainly and unequivocally opposed to extending medical charity to the large number of persons who are absolutely undeserving of charity, and who as a rule secure such services through fraud, or through the maladministration of the dispensaries, hospitals and clinics; and

WHEREAS, The report on "Abuse of Medical Charity" read by Dr. T. H. Renn, and that on "Contract Practice," by Dr. C. D. Pence at the annual meeting of the Chicago Medical Society held on June 19, 1907, prove conclusively that there is good ground for complaint; and

WHEREAS, The statistics show that over \$7,000,000 represents the sum given annually as medical charity by approximately 3,000 physicians in the city of Chicago, an average of about \$2,500 for each physician; and since the Bureau of Charities reports an expenditure of \$2,500,000 for charity by city, county and all other organizations of an eleemosynary nature, it is therefore evident that the doctors are in reality giving three times as much to charity as the entire population of Cook county, which is over 2,000,000 people; and

WHEREAS, We believe that these evils can be eradicated best by establishing a "Clearing House" (as offered by the Bureau of Charities), to which each and every applicant for charity (except those of an emergency nature) must apply, and by which the worthiness of each applicant must be investigated and approved before free services may be rendered by any dispensary, hospital or clinic; and therefore be it

*Resolved*, By the members of the North Shore Branch of the Chicago Medical Society:

First, That we suggest to the Council of the Chicago Medical Society that immediate action be taken in order to terminate the Abuse of Medical Charity in the city of Chicago and Cook county; and

Second, We further recommend that the Council, through its proper committee, accept the offer of the Bureau of Charities to act as a "Clearing House" in the investigation of patients applying for medical charity; and

Third, That such safeguards be used as to insure prompt and adequate attention to the worthy poor; and

Fourth, That it be considered unethical for any member of the medical profession to foster the abuse of medical charity by rendering free services to any one in hospital, clinic or dispensary without reporting same to the proper or authorized officers for investigation; and

Fifth, That it shall be deemed unethical to continue free treatment of any patient in hospital, clinic or dispensary, after investigation proves such patient to be unworthy of medical charity; and

Sixth, That we hereby instruct our Councilors to present these resolutions to the Council of the Chicago Medical Society; and

Seventh, That a copy of these resolutions be sent to each branch of the Chicago Medical Society for their consideration.

T. ANTHONY KREUSNER,  
M. A. GRIFFIN,  
THOS. A. HOGAN,  
J. THOS. PICKERILL,  
A. H. DE MENDOZA,  
Committee.

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### CHANGE OF LOCATION.

Dr. E. W. Kinchloe has removed to Glen Ferry, Idaho.

Dr. Joseph Leuer has removed from Chicago to Gary, Ind.

Dr. F. K. Westfall, of Macomb, has moved to St. Joseph, Mo.

Dr. Bruce D. Hart, of Varna, has removed to Lewistown, Ill.

Dr. P. S. Maby, of Varna, has removed to Runnells, Iowa.

Dr. L. D. Rockefeller has removed from Hornsby to Bunker Hill.

Dr. S. Zimmerman, of Chicago, has removed to Valley City, N. D.

Dr. E. H. Rinkle, of Bunker Hill, has retired from active practice.

Dr. A. H. Foelsch has removed to 219 North Robey Street, Chicago.

Dr. N. A. Cronde has removed from Assumption to Chesterfield, his old location.

Dr. F. D. Pratz has removed from Mowequa to 2400 Dearborn Street, Chicago.

Dr. Henry T. Watkins, of Olney, has removed to 102 Washington Street, Chicago.

Dr. J. E. Colloran has removed from 3502 South Halsted Street, Chicago, to Glendale, Ohio.

Dr. Benjamin F. Stults, of New Holland, Ill., has sold his property to Dr. W. C. Paine, of that town, and will remove to some place not yet designated.

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### MARRIAGES.

HERBERT L. THOMPSON, M.D., to Miss Nymah McLeneham, of Chicago, January 20.

ALBERT CHARLES PURCELL, M.D., Streator, Ill., to Miss Mayme Wolfe, of Eagle, Ill., January 5.

ALBERT WILLIAM BRADFORD, M.D., Sparland, Ill., to Miss E. Nicholson, of Aurora, Ill., January 31.

AUGUST SAUTHOFF, M.D., Madison, Wis., to Rose Mary Blakelidge, M.D., of LaGrange, Ill., January 20.

WILLIAM GRAHAM ALEXANDER, M.D., Evanston, Ill., to Mrs. Bertha Edna Tubbs Patrick, of Des Moines, Iowa, January 26.

## DEATHS.

HERBERT E. A. HANKE, M.D., Hahnemann Medical College, Chicago, 1905, died at his home in Chicago, February 4.

MARINDA E. FULLAM, M.D., Women's Medical College, Chicago, 1886, died at her home in Aurora, January 5, aged 69 years.

MICHAEL C. MORAN, M.D., Rush Medical College, Chicago, 1882: died at his home in Chicago, January 24, from heart disease, aged 56.

JOHN G. HALL, M.D. (years of practice, Ill., 1887), was found dead in his room in Springfield, Ill., February 2, from asphyxiation, aged 80.

BARNABAS MALLOY, M.D. (years of practice, Ill., 1878), formerly of Olney, Ill., died in St. Louis, January 28, while on his way to Texas for his health.

HENRY O. SMITH, M.D., Bennett Medical College, Chicago, 1883; of DeKalb, Ill.: died at the home of his sister in Yorkville, Ill., January 12, aged 56.

JOHN W. PETRIE (year of practice, Ill., 1878), an eclectic practitioner of Nilwood, Ill., died suddenly at his home, January 31, from heart disease, aged 75.

SIMEON M. ROBERTSON, M.D., College of Physicians and Surgeons, Chicago, 1878, died at his home in Mount Vernon, Ill., from tumor of the stomach, January 30, aged 69.

WASHINGTON BRENTON, M.D., Rush Medical College, Chicago, 1854; a pioneer practitioner of Tuscola, Ill.; died at the home of his daughter in that city, January 28, from senile debility, aged 85.

JOHN LINCOLN GARDNER, M.D., Rush Medical College, Chicago, 1883; a member of the American Medical Association; died at his home in Rochelle, Ill., January 15, from pneumonia, aged 53.

GEORGE GREEN, M.D., Rush Medical College, Chicago, 1870; of Aurora, Ill., died at the home of his sister in Waltham, Mass., January 9, from typhoid fever complicating pneumonia, aged 74.

ELIZABETH JAMES, M.D., Hahnemann Medical College, Chicago, 1876; of Chicago; formerly of Springfield; died in Cook County Hospital, February 8, two months after a fall in which she fractured her leg at the hip, aged 78.

CHARLES HAVEN FRANCIS, M.D., Northwestern University, Chicago, 1901; of Reno, Nev.; a member of the American Medical Association and delegate from Nevada at the Chicago session; secretary of the Washoe County Medical Society; died at his home in New Lenox, Ill., January 14, from Tuberculosis, aged 33.

HENRY CLAY ALLEN, M.D., Cleveland Homeopathic Medical College, 1861; Queen's University, Kingston, Ont., 1872; dean and professor of materia medica in Hering Medical College, Chicago; for several years editor of the *Medical Advance*; died at his home in Chicago, January 22, from heart disease, aged 72.



JOSEPH GREENBERRY WOLFE, M.D., Rush Medical College, Chicago, 1890; a member of the American Medical Association; professor and head of the department of pediatrics in the Chicago College of Medicine and Surgery, and physician to the Frances E. Willard Hospital; died from nephritis in that institution, January 28, five days after an operation for tonsillectomy, aged 48.

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## Book Notices.

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PRACTICAL DIETETICS, WITH REFERENCE TO DIET IN DISEASE. By Alida Frances Pattee. Fifth edition. Price, \$1.00 net.

The value of this Miss Pattee's "Practical Dietetics" is shown by the fact that a new edition has been called for each year. Its price places it within the reach of all and it is strictly up-to-date in every particular, supplying practical things for bedside use of value to every active practitioner. We can recommend it very highly to our readers.

GOLDEN RULES OF DIETETICS. The general principles and empiric knowledge of human nutrition; analytic tables of foodstuffs; diet lists and rules for infant feeding and for feeding in various diseases. By A. L. Benedict, A.M., M.D., Buffalo, member of the American Academy of Medicine and of American Gastroenterological Association, etc. Author of Practical Dietetics. C. V. Mosby Medical Book and Publishing Company, St. Louis, 1908. Price, cloth, \$3.00 net.

This is one of the series of medical books issued by the Mosby Publishing House in St. Louis and covers the subject of dietetics in a very thorough and reasonable way. The practice of modern medicine should cover all of the subjects enumerated in this work, and such a work as this should be in the practitioner's library and frequently put to practical use.

AMERICAN PRACTICE OF SURGERY. Volume Five. A complete system of the science and art of surgery, by representative surgeons of the United States and Canada. Editors, Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D., of New York City. Complete in eight volumes. Profusely illustrated. New York: William Wood & Co., 1908.

The fifth volume of American Practice of Surgery is a worthy successor of the four which have preceded it. It deals with regional surgery of the head. This includes the brain, the face, the palate, the eye, the ear, pharynx, larynx and trachea. The plates and illustrations throughout are mainly new and well adapted to their purpose. Our readers will find this system an accurate index to the practice of surgery as it exists at this time, and it should be in the library of every progressive practitioner.

TEXT-BOOK OF DISEASES OF THE NOSE, THROAT AND EAR. For the use of students and general practitioners. By Francis R. Packard, M.D., professor of diseases of the nose and throat in the Philadelphia Polyclinic Hospital and College for Graduates of Medicine. Illustrated. Philadelphia and London: J. B. Lippincott Company, 1909.

In this work the Lippincott Company has presented a very clear exposition of what every practitioner should know concerning the important subject of the diseases of the nose, throat and ear. As the author says, "some knowledge of

this subject is absolutely necessary to every practitioner, for there are probably no special branches which come so intimately in relation to the work of the general practitioner as these do, and there are none of which a little knowledge may be turned to more useful account." It seems to us more space could have been given to the description of laryngoscopy and bronchoscopy than the five lines given. Otherwise the book is a very valuable treatise.

**BACTERIAL FOOD POISONING.** A concise exposition of the etiology, bacteriology, pathology, symptomatology, prophylaxis and treatment of so-called ptomaine poisoning. By Prof. Dr. A. Dieudonné, Munich. Authorized translation, edited, with additions, by Dr. Charles Frederick Boldau, Bacteriologist, Research Laboratory, Department of Health, City of New York. 125 pages. E. B. Treat & Co., Medical Publishers, New York. Price, cloth, prepaid, \$1.00 net.

Published less than a year ago, Prof. Dieudonné's manual on "Bacterial Food Poisoning" has already become favorably known as one of the best presentations on the subject. In the present translation the editor has incorporated descriptions of a number of recent outbreaks of food poisoning, elaborating upon the prophylaxis applicable to American conditions, and also going more fully into detail on the subject of treatment. He has slightly rearranged the material so that paragraph headings could be inserted and the subject of all chapters discussed in the same sequence. An index has also been added to facilitate reference, and this, with other changes and additions, greatly enhances the value of the volume.

**DISEASES OF THE DIGESTIVE CANAL (Esophagus, Stomach, Intestines).** By Dr. Paul Cohnheim, specialist in diseases of the stomach and intestines in Berlin. From the second German edition. Edited and translated by Dudley Fulton, M.D., lecturer on medicine, University of Southern California, Los Angeles. Illustrated. Philadelphia and London: J. B. Lippincott Company.

Diseases of the Digestive Canal, Cohnheim's excellent work, is given to the English-speaking world by the labors of Dr. Dudley Fulton, of Los Angeles, Cal. He has studied the modern methods of diagnosis and therapeutics of the diseases of digestion in Cohnheim's clinic and is thoroughly familiar with the principles upon which the master book is based. The 373 pages of the work enable the author to present the subject in a very clear and succinct way for the use of the general practitioner, and we believe will be more acceptable than the very large volumes which have usually been placed on the market upon this subject. The general practitioner will be glad to know that the greatest amount of information can be obtained from the subjective symptoms rather than from the complicated details of laboratory work, thus enabling any practitioner to diagnose all diseases of the digestive organs and treat most of them himself.

**CLINICAL DIAGNOSIS AND TREATMENT OF DISORDERS OF THE BLADDER, WITH TECHNIQUE OF CYSTOSCOPY.** By Follen Cabot, M.D., Professor Genitourinary Diseases, Post-Graduate Medical School, Attending Genitourinary Surgeon Post-Graduate and City Hospitals, New York. 225 pages; 41 illustrations; 1 colored plate. E. B. Treat & Co., Medical Publishers, New York. Price, prepaid, \$2.00.

This book has been written for the guidance of the general practitioner, the chief aim of the author being to give practical methods for the diagnosis and treatment of disorders of the urinary bladder. After considerable experience with both the medical and surgical sides of the subject, the need of such a book has become apparent. Many practitioners in the past have felt that the technique of cystoscopy was beyond their reach, but the recent improvements and reduction in

cost of the instruments for this purpose have brought it within the reach of all, thus enabling them to accurately diagnose and successfully treat various hitherto obscure disorders of the bladder and kidneys. While cystoscopy has justly been accorded an important position as a means of diagnosis and also in the treatment of many disorders, all useful methods have been discussed.

**DISEASES OF THE GENITOURINARY ORGANS AND THE KIDNEY.** By Robert Holmes Greene, A.M., M.D., New York, and Harlow Brooks, M.D., New York. Second Edition, revised and enlarged, with 323 illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Price, cloth, \$5.00 net.

This, the second edition of this valuable work, has appeared in a little over a year after the first edition, and this testifies louder than words the reception which has been given to the book. In the preface to the first edition the authors say: "It has been the purpose of the writers to present in this volume a discussion of the more important disease conditions of the urogenital tract, taken from the standpoint of the general practitioner and surgeon. In so far as possible, they have attempted to incorporate such methods as they personally have found most practical and useful, all of which they believe may be successfully employed in the hands of any well-equipped practitioner, familiar with modern medical and surgical technic. The writers do not profess that the book is complete; this would be impossible in a work of this size. They have attempted to devote the greatest amount of space and the fullest descriptions to those conditions and methods which have appeared to them to be of the greatest importance, or to those which, being of recent development, may be presumed to be less familiar to the practitioner." This statement sufficiently indicates the character of the work, which is especially valuable to the ordinary practitioner of medicine in America. It gives us pleasure to recommend it to our readers.

**THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES.** Fifth Edition, revised to Sept. 12, 1908. Press of the American Medical Association. Price, paper cover, 10 cents; cloth, 35 cents.

The scope of this work is accurately set forth in the preface which we print as follows: "In February, 1905, the Council on Pharmacy and Chemistry of the American Medical Association was organized to investigate the proprietary medicine question and to pass on those which should be up to the standard required of ethical proprietary medicines. From time to time reports of this Council have appeared in the columns of *The Journal of the American Medical Association*, and *The Journal* has also contained other matter relating to the question of nostrums and proprietary medicines not directly connected with the work of the Council. Requests have been received repeatedly for this or that number of *The Journal* containing an article on the subject, and as it has been impossible to furnish many of the copies asked for, it has been thought best to collect some of the matter and issue it in this reprint form. The matter is reprinted from *The Journal*, and following each article is given the date on which it appeared." Our readers will find the collection of reprints of *The Journal* in this little work a very valuable hand-book to have upon the desk to be able to show to patients and traveling drug men the abuses which have grown up in the proprietary medicine matter. With the aid of this book almost any one might be able to prepare an argument for the public press which would do a great deal toward driving this evil out of existence.

**GONORRHEA IN WOMEN.** By Palmer Findley, M.D. C. V. Mosby Medical Book and Publishing Company, St. Louis, Mo., 1908. Price, cloth, \$2.00 net.

Dr. Findley, now residing in Omaha, was connected with one of the medical schools of Chicago for some time, and is well known to our members. His

monograph of 112 pages on the subject of Gonorrhea in Women assembles the most important facts in this disastrous disease upon the female organism. It is gratifying to know that the views expressed by Noeggerath of New York City in 1878 have been fully accepted, and as Bumm has happily put it, "Noeggerath was more fortunate than Semmelweis; he lived to see the triumph of his observations. For this he has to thank Neisser, who soon after discovered the gonococcus and made possible the certain proofs of his statements relative to the frequency of the lesion." Dr. Findley believes that prior to these epoch-making periods, gonorrhea was diagnosed in the male with comparative ease, because of the fact that of 100 discharges from the male urethra 99 were due to gonorrhea, while in the female urethral and leucorrheal discharges are due to a great many causes, and therefore the only positive means of identifying a gonorrheal discharge is to recognize the essential cause. Noeggerath made extended observations in New York City and published statistics that provoked no little criticism. He stated that 80 per cent. of married men have had gonorrhea; that 90 per cent. of these have never been thoroughly healed, and that of five married women three have gonorrhea. That his deductions from personal observations are regarded as extravagant and unwarranted would seem apparent, from a study of the literature.



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## ORIGINAL ARTICLES

### Symposium on Syphilis

#### CUTANEOUS MANIFESTATIONS OF SYPHILIS.\*

JAMES NEVINS HYDE, M.D.  
CHICAGO.

*Mr. President and Gentlemen of the Chicago Medical Society:*

In thanking you for the invitation extended to me to take part in the symposium on the interesting subject selected for discussion this evening, I feel sure that you will agree with me in a foreword. In the vast and accumulating literature on the subject of syphilis there is no one of its recognized phenomena which has not been amply described. The pencils of masters, men of enormous experience and keen judgment, have delineated in type and portrait every phase of this malady of maladies. In the few minutes at my disposal it would be impossible to cover the wide field of its cutaneous manifestations. I have, therefore, in the hope that it might prove interesting to the general practitioner, concluded to present to you four pictures representing groups of symptoms sometimes following the initial stage of the disease, groups which as such are not generally recognized and accepted.

The first picture to which I call your attention is that of the man whose evidences of systemic infection are so slight as to escape observation save under the closest scrutiny. I had almost set down the words, "where the evidences of systemic infection are wholly wanting," but this would be somewhat inexact. There are individuals in a hypochondriacal condition of mind who are fearful of syphilis and anxious to believe that its evidences may escape even the best trained observation, that the disease may lack expression when actually in possession of the citadel of the human body. In the ears of such a class, the words which follow might awaken apprehension and prove a source of unspeakable wretchedness. But men of science approach the truth fearlessly. Without any

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\* Read before the Chicago Medical Society Jan. 20, 1909.

question there is a class of subjects in whom the first evidences of systemic disease are so evanescent, so inconspicuous, so trivial, that they defy detection save after the most exhaustive and scrupulous search. I believe these patients fall into two groups. The first group is the most happily constituted. Granting that the *treponema pallidum* (sometimes termed the spirochæte) is the germ containing within itself or the toxins it produces all the power and potency of syphilis, it is certainly implanted at times in soils so unfavorable for its propagation that there it languishes and perishes without working obvious harm. There is nothing surprising in this fact. There are heifers so inapt for the reception of the vaccine virus that they can not be made vaccineifers. There are men and women who are vaccinated only with difficulty and after repeated failures. There are human subjects unvaccinated previously who have as the sole evidences of a variola which has been transmitted to them a single pox, or whose disease is limited to a transient malaise and mild pyrexia. All have seen such mitigated cases of scarlatina, cholera, and even yellow fever, that one is surprised at the insignificant results. In syphilitic patients there are those who may only exhibit a few papules on the forehead or a few scaling patches on the palms, and whose evidences of disease, after half a century of observation, are absolutely limited to these few manifestations. These are, indeed, the rare exceptions to the rule. They are so few and so readily escape observation that their existence as a class may well be doubted by the scientific skeptic.

The second group in this picture is by far the more sad and perilous. Herein are to be classed the men and women whose first systemic manifestations are trivial, insignificant, and apparently without serious portent, where the virus of the disease has stealthily invaded the organism and has concealed its approaches in a fashion that among all diseases syphilis alone affects. These patients are often pallid, anemic, asthenic. Their blood count shows a loss of hemoglobin and decrease in the number of erythrocytes. Even before the era of the Wassermann test, they might be classed as suspects. Externally there may develop, as in the other class cited, a few papules or one or two mucous patches. The physician may then be lulled into a false sense of security, especially when, as may happen, the few external evidences of the intoxication rapidly vanish under an appropriate therapy. Months, even years, may elapse and the cloud over the patient seem to be dissipated. Eventually the blow falls, seemingly the more violent, the more destructive, and the more deadly for the long-deferred explosion. A gumma of the brain, an obliterating endarteritis, a deep subcutaneous lesion developing with a relentlessness which the French call *terriblement*, melts down tendon, bone and muscle in its path with a fury that suggests to the mind the destruction wrought by a tornado. I venture to cite one illustrative case, that of a gentleman delicate of frame and somewhat anemic, who applied to my friend, the late Dr. Robert W. Taylor, of New York, and who gave a history of an insignificant initial sclerosis, the

nature of which was in doubt. He was repeatedly examined afterward by Taylor and myself for symptoms of systemic invasion. During the year following, after repeated and careful examinations, we could never recognize anything more suspicious than a slight but fairly typical alopecia of the brows and one enlarged postoccipital gland. For three years this patient lived for the most part in Europe pursuing the treatment advised, only at intervals and at his own convenience. He was finally brought back home, the victim of unmistakable tabes.

The second picture representing cases to which I desire to call attention may be described, in terms of one of those sketched above, as "happy." It includes men and women who have syphilis, as some children have measles and scarlet fever, in one superb, brilliant, generalized exanthem, and then no more. This is the ideal patient; his or her syphilis is the ideal of the successful practitioner. The conception that syphilis may be in cases a disorder displayed in one general exanthem is quite different from that taught by the aid of the worn manikin of the schools. We must have our manikin; from it we have to learn the rudiments. It has taught the most of us what we first knew of disease. But, all said and done, it is a clumsy attempt to represent what we discover at the bedside or in the clinic.

According to the old conception of the course of syphilis, the conception first formulated in the now antiquated scheme devised by the immortal Ricord, there is a primary, a secondary, and a tertiary stage. The suggestion is that of a railway train which starts from a given point and in time reaches the several stations set down on the map. I was much gratified when Professor Adami, of Montreal, first endorsed my representation of the infection-process from the pathologic point of view. A fitter comparison of the post-infection carrier would liken it to what happens when a pebble is thrown clear through a pane of glass. From the wound thus inflicted the glass may be riven in any of several directions radiating from the point of impact of the pebble, or in many lines, some running lengthwise of the entire pane, some producing a shattering effect.

The patient with one and only one exanthem in constitutional syphilis, briefly the ideal patient, is young, vigorous, without bad habits, and, therefore, preferably the innocent victim of extragenital infection. On this soil the toxins of the disease work with untrammelled facility. The first and only macular exanthem is universal, copious, brilliant, disfiguring. The usual concurrent symptoms of the disease at this period (adenopathy, involvement of the mucous surfaces, etc.) are present. Then intervenes an appropriate, skilfully conducted, properly prolonged, energetic treatment. There are no further symptoms. The caviller will protest; "wait for ten years and see!" Some of these patients have been watched for twenty years and more, without further consequences. Without fear of contradiction, it may be set down that syphilis is in some cases a disorder of one exanthem, one vigorous expression, or, to use the language of French authors, one grand explosion.

The third picture includes the subjects of somewhat unusual occurrences in systemic syphilis. It is that which most conspicuously disarranges the rules set forth in the manikin of the schools. It represents a group of accidents which conclusively disprove the railroad time tables, in which after a classically developed syphilitic primary infection there must be a secondary and later a tertiary stage. Often, indeed, in this singularly elusive disease, that which, according to the rule, should be secondary becomes tertiary or even quaternary, and the latter secondary. It is a striking fact that the French themselves, half conscious of the defects of their scheme, have been obliged to coin the terms "tardy," "late," "precocious" and "galloping" in order to make the time-table fit the facts. In truth, whenever syphilis is really formidable in its career, it wastes nothing in the way of time. Of all grave forms of syphilis, it may be truthfully said that the last may be first and the first, in rare instances, may even be either last or extremely late. The liver has been found, postmortem, studded with gummata three months after the date of infection. I have seen the hard palate perforated when the stigmata of the earliest exanthem had not yet faded. Who has not seen destructive gummata of the skin conclude the cycle of bursting, ulceration, and cicatrization within the first half-year after the onset of the disease! These are not wonder histories—they are the facts which pathologists have to face and to explain.

A highly valued contribution to this interesting subject, of the character one would expect from the enormous experience of the author, is Fournier's late work, entitled "*Syphilis Sécondaire Tardive*," published in 1906—a title which in itself demonstrates how fully the author and his countrymen are dominated by the inflexible secondary-tertiary schedule. The pages of this work play such havoc with the established precepts of syphilology that they suggest the confusion wrought by a bull in a china shop! Here are seriously depicted superficial palmar lesions in syphilis at the twenty-ninth year of its existence: papulo-squamous scrotal lesions ten years after infection: superb lenticular and circinate maculations set down as "tertiary erythema!" In the words of the Master, "It is possible that the symptoms of a secondary disorder may develop in the course of the tertiary period." I have been able to verify many of these facts. Often, indeed, my late colleague, Dr. Frank Hugh Montgomery, has joined me in studying and questioning the meaning of these odd phenomena; and, while I have been willing to believe that in some of these cases the symptoms were more probably evidences of such a toxic erythema as Osler has ably discussed before the profession, the facts, however explained, have to be recognized.

In truth, gentlemen of the society, it is only the vulgar mind that looks upon a dermatosis in syphilis as the disease itself. When we know more than at present, we shall recognize the fact that the cutaneous expression of a disease is only a part, often a small part, of the whole. The large number of dermatoses are simply surface indications of a deeply effective toxin—and the syphilitic lesions of the skin are of that



order—whether directly or indirectly produced by the invasion of the treponema which, after introduction at the invasion-atrrium, may set up radiations thence in one or many directions. The virus at times may be quiescent; at others, even after long periods of apparent repose, it may paint again upon the surface of the body the evidences of renewed activity.

The fourth and last picture to which I wish to call attention is one which depicts more diagnostic errors than all others. It is a picture which portrays the unusual, the eccentric, the unexpected, in any stage or period of the disease, the picture that seems to assert the impossibility of syphilitic infection, the picture that suggests to the observer for the first time confronted with it that never before was such a combination of unclassified symptoms. When I say that these are the instances where in my personal observation some of our best trained colleagues in Europe and our own country have blundered I do not hesitate to array myself in the same category. Of these cases I am tempted to set down, as a French writer has written of chancre of the vaginal wall, "It is impossible that one shall not commit errors in the diagnosis." The figures in this picture are so numerous and so interesting that it would be impossible to portray them in the time at my command. Before closing I content myself, in the way of illustration, with four hastily sketched silhouettes, the shades of delicate distinction being purposely omitted:

1. A married woman with adult children had taught her parrot to kiss her on the mouth. During one of these episodes a child pulled the parrot's tail and the beak of the bird pierced the lip. In the course of weeks the face was thickly studded with deeply empurpled, olive-sized tubercles frightfully disfiguring. It was believed that the parrot had partaken of poisoned meat and had produced thus a septicemia. Diagnosis: syphilis papillomatosa. The woman had a lover who had infected the wound.

2. A middle-aged man had the right upper arm enormously tumefied and studded with livid tubercles rising from a densely infiltrated mass. One of the best surgeons in this country pronounced the patient leprous and advised operation. Later investigation by another medical man resulted in the discovery of finger nail-sized cicatrices in the mass and other suggestive lesions. Diagnosis: syphilis gummatosa, the morbid condition being eventually completely relieved by appropriate treatment.

3. A woman, 70 years of age and a grandmother, displayed multiple, dense, discrete, papulo-tubercles over the skin of the upper chest seated on a hard base. On the background of the senile and somewhat deeply pigmented skin the aspect of the dermatosis was almost, not quite, sufficient to justify the belief expressed that it was a case of pigmented sarcoma. Diagnosis: syphilis tuberosa. The old woman had been infected on the tonsil by a syphilitic grandchild. The mother of this

infant, daughter of the patient, was found later to be syphilitic, her husband admitting the fact of his own infection and exhibiting evidences of it.

4. A patient was presented to a medical class as a perfect illustration of elephantiasis arabum. The right leg and foot presented a very fair counterpart of the condition depicted in most of the published portraits of the disease named. The enormous bulk of the affected organ, covered with a dense, rugous, and elephantiac integument, seamed, ridged, furrowed, deeply embrowned and, as usual in these cases, secreting an offensive discharge, completed the resemblance. On close inspection, however, the mass was seen to be composed of individual lesions, some resolving, some degenerating. Diagnosis: syphilis gummatosa. The limb was restored to a fair degree of usefulness by proper medication.

These instances might be multiplied a hundredfold from the experience of all experts, each, however, with a different exhibition of the oddities which may be evolved by this singular malady. It is capable of invading every tissue and every organ of the human body and in each playing such pranks as Ariel never dreamed of!

But let not the clear-headed practitioner become confused or resign himself to despair. In every one of these different cases great is the reward for the closely observant eye, the persevering patience, the exhaustive examination. In this field he that seeketh usually findeth. Behind the scrotum, lurking in the arched roof of the palate, over the heel of one foot, hidden in the depth of the testis, stamped over the shoulder or skin in the form of a scar, here or elsewhere, can often be found the tell-tale of the secret that eludes a casual survey or a hasty glance.

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## THE SERUM DIAGNOSIS OF SYPHILIS AND ITS CLINICAL VALUE.\*

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In 1902 Bordet showed that it was possible to determine the bacteria causing an infection by an examination of the blood serum by a special method known as complement deviation. Complement is a substance present in the blood of man and animals. It is destroyed or rendered inactive by heating blood serum to 36° C. for one-half hour, on account of which property it is called thermolabile.

When the body is invaded by any pathogenic organism which sets up the infection it is capable of producing, the body cells react against the infecting organism and its products, producing an opposing body that finds its way into the blood stream. This is called an immune or antibody, which is also called an amboceptor, the purpose of which is to destroy in the special manner peculiar to it the infectious agent. This

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amboceptor is unaffected by heating the blood serum, in which it is contained, to 56° C. for one-half hour, and it is, therefore, termed thermostabile. Other substances, as blood corpuscles, proteids, lipoids, etc., may also give rise to the formation of antibodies when injected into the body.

An individual suffering from an infection, therefore, will have in his blood serum two substances, one called complement, which is present in all blood serums, and a second specific substance known as an antibody or amboceptor, the first being destroyed by a certain temperature (56° C.) in a half-hour and the second unaffected thereby. The amboceptor or antibody has two points of affinity, which may be represented by this diagram, one of which will always unite with the bacteria or product the injection of which gives rise to its production by the body, and the other with complement when it is present, this union causing the destruction of the bacteria or toxic product. This action will occur in a test-tube under favorable conditions, as well as in the body.

The following is an example: If you inject into an animal of one species, as represented by the rabbit, the blood corpuscles of another, as represented by the sheep, the rabbit will react against the foreign corpuscles producing an antibody, called in this instance a hemolytic amboceptor. This amboceptor has, as mentioned above, two points of affinity, one of which will unite with sheep's corpuscles and the other with complement, the union resulting in the destruction or solution of the corpuscles. In this way the foreign corpuscles are disposed of in the body of the rabbit. This rabbit, however, has manufactured antibodies in excess of its needs and it will be found that if you bring into contact in a test-tube the serum of the rabbit and sheep's corpuscles the solution of the latter will occur. This solution has resulted because the rabbit's serum contains the two bodies necessary to the solution, namely, a specific antibody (hemolytic amboceptor) and complement.

If this rabbit serum is first heated to 56° C. in a water bath for one-half hour, the complement will be destroyed, as above described. If now you mix this heated serum with the blood corpuscles in a test-tube, the amboceptor which was unaffected will unite with the corpuscles with one point of affinity, but the other point for complement will be unsatisfied (as the complement was destroyed by heat), and, therefore, solution of the corpuscles, for which it is essential, will not occur. If, however, you add any other fresh blood serum, as guinea-pig serum, which always contains complement, this necessary factor will be supplied and solution will occur. I have thus explained at length this phenomenon, as on this question of complement the entire syphilis reaction depends.

To recapitulate somewhat, it was stated that when you bring the blood serum (immune sera) of one infected patient in contact with the agent that caused the infection the antibody of the serum would unite with the infectious agent with one of its points of affinity and with the other it would unite with or bind complement.

As the infectious agent in syphilis is not definitely known, at least has not been cultivated, it occurred to Wassermann that an extract of a syphilitic organ might contain the infectious agent and enable one to demonstrate the corresponding antibody in the serum of a syphilitic, and in this manner enable one to diagnose syphilis from the blood. While subsequent work has indicated that the infectious agent is not the one concerned in the test, in this instance, it has proved that the antibodies to which this something gives rise are found only in the blood of syphilitics and, therefore, we have a specific blood serum test for syphilis.

If the organ extract, the preparation of which will be described below, is brought in contact with syphilitic sera, the antibody contained in the latter will unite by one point of affinity with the organ extract and by the other with complement. As this change is not visible to the eye, because no precipitate or color change occurs, it is necessary to resort to some means or indicator for finding out whether such union had occurred. To this end the Bordet principle is used as follows:

If the serum of the suspected syphilitic is heated to 56° C. to destroy the complement, before it is mixed with the syphilitic organ extract, the antibody of the serum, if present, will unite by one point of affinity with the organ extract: a fresh serum, as guinea-pig serum, is added to supply complement. If the serum was syphilitic and contained the specific antibody, the added complement will be fixed on it. To demonstrate whether the latter has occurred or not, you now add the heated serum of a rabbit that contains an antibody that will destroy in the presence of complement sheep's corpuscles. Sheep's corpuscles are also added. If the complement contained in the guinea-pig serum that was added was taken up, or united with by the syphilitic antibody, there will be none left over and consequently the added sheep's corpuscles will not be dissolved. If, however, the serum was not syphilitic, the complement will not have been taken up, but will be left over for union with the hemolytic amboceptor of the inactivated rabbit serum, which latter unites with the blood corpuscles and the combination causes the solution of the latter.

#### SUBSTANCES EMPLOYED IN THE TEST AND THE METHODS OF THEIR PREPARATION

is as follows:

*First. Organ Extract.*—This should be made preferably from the liver of a dead syphilitic new-born. The liver is ground up with sterile sand in a mortar and thereafter placed in a flask. Alcohol is added in the proportion of 5 c.c. for every gram of liver. The mixture is well shaken and kept in the flask. Enough of the extract may be filtered off through filter paper as needed in the test. An alcoholic extract, made in this manner, is very stable.

*Serum of Patient.*—The blood of the patient is obtained either from a puncture in the end of the finger that has been constricted by a bandage or by a hypodermic needle from a vein. Two to 10 c.c. should be



secured. It is allowed to clot and stand on ice until the serum separates, which takes in about twelve hours. The serum is poured or pipetted off into a sterile tube. If not clear it is centrifuged and the clear serum only removed. This is heated to  $56^{\circ}$  for thirty minutes to destroy the complement.

*Complement.*—Guinea-pig serum is used for its complement. The animal may be bled from the jugular. The blood is allowed to clot, and the serum is poured off and centrifuged, or the blood may be defibrinated and centrifuged at once and the serum removed. This is best obtained fresh every time a test is undertaken. Sometimes complement may remain good for three or four days if kept on ice. This, however, is never certain, and many failures in making these tests are due to the serum having lost much of its complement.

*Specific Hemolytic Amboceptor.*—It is my custom to use the serum of a rabbit that has been immunized with sheep's corpuscles. This is obtained by injecting the rabbit with a 5 per cent. suspension of washed sheep's corpuscles into a vein, under the skin or into the peritoneal cavity of a rabbit, weekly for several weeks. The rabbit is then bled from the heart or jugular, the blood collected, allowed to clot and the serum collected and centrifuged. The clear serum is removed and heated to  $56^{\circ}$  C. for half an hour to inactivate it.

*Sheep's Corpuscles.*—About an ounce of blood is removed from the jugular of a sheep through an aspirating needle. It is defibrinated by a sterile rod of wire or by glass pearls. About 5 c.c. of the defibrinated blood is placed in each of two centrifuge tubes. The tubes are then equally filled with salt solution, the tubes inverted to mix the blood well and they are then centrifuged. When the cells have settled to the bottom the salt solution is poured off and fresh salt solution added. The process is repeated and all of the supernatant fluid is carefully removed.

An equal quantity of salt solution is now added to one of them which gives a 50 per cent. suspension for the test. The corpuscles contained in the other tube are suspended in enough salt solution to make them a 5 per cent. suspension. This is available for injecting rabbit. Before beginning the actual reaction it is necessary to examine the different ingredients used in the reaction: First, to see that the extracts do not, in the proportion used in the reaction, bind complement; second, to see that the complement is active; third, to determine the strength of the amboceptor; fourth, to see that the blood corpuscles are not hemolyzed.

The extract should be tried out with a known syphilitic and normal serum to see that, in the first instance, it inhibits hemolysis and, in the second case, does not do so. It will be found that in trying fresh extracts they may bind complement alone in the proportions generally used. Under these circumstances they should be diluted to that point where they will not, in twice or three times the quantities used in the reaction, inhibit hemolysis alone.

Second. Complement.—If the guinea-pig serum is obtained the day of the reaction, it will always be found active. Occasionally it will hold good if kept on ice for two or three days.

Third. Amboceptor.—The inactivated rabbit serum is tested in various dilutions of one drop to 1 cubic centimeter, etc., up to 8 or 10 cubic centimeters of salt solution. A drop of each dilution to a drop of complement and a drop of 50 per cent. suspension of sheep's corpuscles are placed in separate test-tubes to which had been added in each instance ten drops of salt solution. All are placed in an incubator for one-half hour. Note is made of the highest dilution of amboceptor that caused solution. Three times the strength of this is used in the reaction. The blood corpuscle suspension may remain good, if kept on ice, for four or five days. If there is a trace of hemolysis as is indicated by the dark red color of the supernatant solution, they had better not be used and a fresh suspension prepared.

*The Performance of the Reaction.*—A series of test-tubes are required, to each of which ten drops of salt solution have been added. For every serum two test-tubes are necessary. To each add a drop of serum to be tested, and to one of these add a drop of organ extract: to both add a drop of complement.

Controls.—To one tube add a drop of extract and one of complement, this serving as a control on the extract. To one tube add a drop of complement only. To another tube add a drop of one of the sera being tested to see if it has been sufficiently inactivated. Place all tubes in an incubator for one-half hour. Remove and add to each a drop of diluted amboceptor and one of blood corpuscles. As additional controls add a drop of amboceptor and one of blood corpuscles to a test-tube to see if the amboceptor alone dissolves blood corpuscles. Replace in the incubator for one and one-half hours. On removing the tubes from the incubator, a reading is made and noted, and a second reading, which is the final one, is made 12 to 24 hours later.

For the test to have been reliable, all controls must have been satisfactory. In tubes containing extract and no serum, hemolysis should have occurred. Tubes containing sera and complement without extract should be hemolyzed. In case the controls are satisfactory, all tubes containing sera and extract in which hemolysis did not occur at all or only incompletely are regarded as positive; all those in which hemolysis is complete or practically complete are negative. In every test known, syphilitic and normal sera should be used as controls against the suspicious sera. It is to be observed, however, that occasionally normal sera and also syphilitic sera will undergo such changes on standing some days as to entirely change their action with syphilitic extract. This should always be borne in mind where in subsequent reactions they act differently from previous examinations.

*Specificity of the Serum Reaction.*—For the reaction to be considered specific for syphilis it was necessary that the reaction should not only be found positive in cases of syphilis, but that it should prove

uniformly negative in non-syphilitic cases. Up to this time controls into the thousands have been examined and the infrequency of positive reaction obtained in those certainly non-syphilitic has been so evident as to remove all doubt as to its specificity and clinical applicability.

Landsteiner, however, found that the serum of rabbits that had been inoculated with trypanosome *equiperdum*, producing "dourine krankheit," caused an inhibition of hemolysis. He suggested that it might be found that diseases caused by trypanosome and protozoa would give the reaction. Much and Eichelberg have recently reported finding an inhibition, never complete, of hemolysis in a number of scarlet-fever cases, and, holding Landsteiner's experience in mind, suggest that scarlet fever may be due to a protozoa infection.

I obtained the reaction in three cases of noma in which the *Bacillus fusiformis* and a spirillum are regarded as the etiologic factors.

#### PRACTICAL RESULTS OF THE REACTION.

The results of the reaction in cases of syphilis, latent syphilis and metasyphilis show a relative constancy in the frequency of positive reactions. In the earlier work with the reaction by Neisser, Bruck and Schucht, the incompleteness in the technique probably was responsible for the comparatively small per cent. of results obtained by them in cases of syphilis. Wassermann's and Plaut's examinations of the spinal fluid of tabes cases showed positive reactions in 78 per cent. of them. Marie and Levaditi obtained practically the same results in cases of general paresis.

Without entering into an extended discourse on the results obtained by various investigators, I will give the results obtained by me in 203 examinations with the serum reaction. Fifty-three of these cases were controls, made up of cases of various infections, including typhoid, pneumonia, tuberculosis, etc. The results of these examinations were uniformly negative, except in three cases of noma and four of scarlet fever. The reactions in the noma cases were quite marked, while in the scarlet-fever cases that gave a positive result the inhibition of hemolysis was slight. It is possible that in the noma cases the suggestion of Wassermann, that cases of infection caused by spirilla might give the reaction, is exemplified, in view of the fact that noma is said to be due to the fusiform bacillus and a spirillum. Whether the same explanation will hold good for scarlet-fever cases giving a reaction must be decided in the future. In any event these are both infections with which syphilis would hardly come into conflict in differential diagnosis. Thus, instead of lessening the value of the serum reaction, it may be looked upon, as Wassermann suggested, as a broadening of the application of the test to other diseases caused by spirochætæ, protozoa infections, etc., that would not come into consideration in the differential diagnosis of syphilis.

Of the 150 cases of syphilis, suspected syphilis, latent syphilis and metasyphilis examined, 123 were positive and 27 negative, making 82 per cent. of positive reactions. This corresponds quite closely to the

later results obtained by various investigators in these cases. The gross figures, however, do not indicate sufficiently close the results obtained by the reaction at different stages of the disease, as will be seen from the following: Of ten cases in the primary stage, including all cases prior to the appearance of secondary symptoms, all, or 100 per cent., gave a positive reaction; thirty-six cases in the secondary stage, 34, or 95 per cent., gave a positive reaction; thirty-one cases in the tertiary stage, 29, or 94 per cent., gave a positive reaction; sixteen latent cases, of which 9, or 56 per cent., gave a positive reaction; fifty-five cases of parasyphilis and visceral syphilis, 41, or 76 per cent., gave a positive reaction; two cases that had been treated energetically by mercury, the one with injections and the other with inunctions, gave a negative reaction. The latter case had, before the beginning of the treatment, given a strong reaction.

The result of the reaction in diseases of the central nervous system has been especially illuminating. This has been particularly so in cases of general paresis and tabes. In first examinations of this class of cases the spinal fluid was examined by Wassermann and Plaut, by Marie and Levaditi, by Schutze and by Morgenrath and Stertz. They found from 70 to 80 per cent. of these cases to give a positive reaction, and more recent examinations of the sera of this class of cases by Plaut, etc., show them to be positive in from 90 to 100 per cent. Whatever doubt may have existed as to their relation to syphilis has been fully dispelled. In fact, as claimed by Lesser, they might, as well as all other parasyphilitic processes, be considered as a quartan stage of syphilis, in which another form of pathologic changes differing from the usual gummatous or diffuse fibrous changes exist, but are dependent on the same source, directly or indirectly.

Among the cases of visceral syphilis examined by me were cirrhosis hepatis, aortic aneurism, myocarditis, specific arteritis, etc. It is quite interesting in this connection to note the infrequency with which visceral syphilis, excepting syphilis of the nervous system, is clinically diagnosed. Gummata of the brain are usually recognized symptomatically, because of the pronounced clinical manifestations to which they give rise. No so, however, with gummata of the other viscera. This may be either because the gumma is so located that it does not interfere with the function of the organ and, therefore, does not give rise to symptoms, and its site may be out of reach of the palpating hand, or because, on the other hand, syphilis of an internal organ may produce a clinical picture simulating other conditions. No better example of this might be cited than syphilis of the liver, which may simulate malignant growth of this organ, cholecystitis, obstructive jaundice, etc. Failure to consider syphilis as an etiologic factor under such circumstances is due sometimes to lack of acquaintance with such conditions, at other times to the fact that no evidence of past syphilis is present, nor any history of the same obtainable. And still in every disorder of the liver and in every prolonged febrile disturbance in which the etiologic factor



is uncertain, syphilis should receive consideration and the serum test should be resorted to. It is a notable thing that, while an infection in one organ may give rise to little or no febrile disturbance, the most decided febrile reaction may result from the same infection when it attacks another organ. No better example of this could be cited than the infection known as mumps, which, while it may cause but slight variations in temperature while confined to the parotids, shows a marked febrile disturbance when it attacks the testicle. A reversal of this is noted as between syphilis attacking the testicle and liver. Occasional reports have appeared during the past decade and a half on temperature accompanying syphilis of the liver. These cases are more frequent than is generally recognized, and not a few of them come to the operating table, and occasionally even there are unrecognized. Leser, in his post-mortem studies of visceral syphilis, saw thirty cases of liver gumma that had not been diagnosed clinically. In twenty-two cases no clinical symptoms pointing to them occurred. In eight cases of liver cirrhosis their syphilitic character had not been recognized. Nineteen cases of gumma of the lung, often combined with tuberculosis, had not been recognized clinically, and likewise three cases of gumma of the heart, two of the spleen, two of the suprarenals, and two of the radix mesenterica. A not infrequent result of syphilis which is practically never diagnosed clinically is the mesoaortitis retrahens of Heller, and syphilis of the arteries in general, until the secondary manifestations arising therefrom render them evident. A forcible emphasis of this serious shortcoming in our diagnostic methods is the fact that about 80 per cent. of all aortic aneurisms have their origin in a mesoaortitis retrahens. As this condition is, therefore, only recognizable practically with the appearance of a full-fledged aneurism, the vitally important period of therapeutic intervention by specific treatment has elapsed. While it should concern us seriously to recognize at the earliest possible moment aneurisms by means of the *x*-ray, etc., knowing the apparent advantages occurring in early treatment, we are placed in a far stronger position, parallel to what the surgeon is wont to term with relation to cancer the "precancerous stage," by virtue of the serum reaction, which enables us, in the vast majority of cases, to determine the existence of active syphilis, hence is of incalculable value from a therapeutic standpoint in syphilis of internal organs that obscure themselves from early diagnosis or that unfortunately simulate other pathologic conditions.

An exceedingly interesting observation from Leser is that in Berlin in about 9 per cent. of all men over 25 years that come to autopsy syphilis is anatomically demonstrable. And in most of these symptoms immediately depending on the changes may not have been complained of, to-wit, gumma of the liver, mesoaortitis retrahens, orchitis fibrosa, etc. In this connection our present conception of latent syphilis must undergo considerable adjustment. As it is estimated that about 20 per cent. of the male population of Berlin over 25 years of age have syphilis, this 9 per cent. presenting evidence of visceral syphilis, would represent

about half the cases that have had syphilis. While the majority of those cases are apparently free from evident manifestations of syphilis during life either by virtue of treatment or apparent abeyance of the infection, it is more than probable that in this 50 per cent. of cases the apparently quiescent virus sits in some internal organ or organs surrounded by more or less of pathologic changes.

A remarkable coincidence and apparent substantiation of this statement lies in the fact that, in round numbers, about half of the latent cases of syphilis, in the experience of various investigators, give the serum reaction. In other words the frequency of the serum reaction in latent cases is about the same as the frequency of syphilitic processes in the internal organs that are not generally recognized during life. No stronger possible argument than this could be introduced to prove that a positive Wassermann reaction indicates an existing syphilitic process in the organism.

The clinical advantages of the serum reaction for detecting such cases and subjecting them to treatment is clearly evident, especially when we remember that, next to tuberculosis, syphilis is the most important cause of death in man.

#### CONGENITAL SYPHILIS.

One of the interesting chapters in the syphilis question is that which relates to congenital syphilis. I have examined eleven cases of congenital or suspected congenital syphilis; these are not included in the above statistics. Six of these were under one year; five were older children, from 1½ to 12 years. Of the latter, one, a girl of 12 years, had bilateral periostitis; a boy of 10 years mentally defective had extensive ulcers on both thighs and legs; a boy of 2½ years had a large ulcer at the margin of the anus; the other two had specific skin lesions. All of these children gave a strong positive reaction for syphilis. As they were hospital cases in which close historical data as to maternal and paternal infection were unobtainable, any analysis of them with relation to the latter was not possible. It simply demonstrated the certainty of obtaining the serum reaction in congenital as well as acquired syphilis, and its constancy in the presence of manifestations.

Among the suckling children were two that had had manifestations of syphilis from the sixth or eighth week of life, although at the time of examination all external manifestations had disappeared, both having been under treatment. These babies gave a positive reaction. The parental history in one of these is as follows: Father had contracted syphilis within a year of his marriage, during the greater part of which time he was under treatment. Mother had not shown any evidence of syphilis before or subsequent to the birth of the child. No glandular enlargements. Skin and mucosa free from any lesions or scars. The blood serum and milk of the mother were examined several times and were always found negative. In the other case both parents had syphilis,

the mother having contracted it from her husband before the conception of this child. The parents and child gave a positive reaction.

An infant of four months was brought to Dr. Wolf on account of a large head and because it did not seem as lively as other infants. The child had not shown any of the skin or mucous membrane symptoms of syphilis. The mother had never, to her knowledge, presented any symptoms. The blood serum of both and the milk of the mother were examined. The infant gave a positive reaction and the mother a negative one. We apparently have here, as well as in the first case, a concurrence with Colle's law, namely, the apparent immunity of the mother and a syphilitic child. Attention was first called to the association of hydrocephalus with congenital syphilis by Virchow, and we have here a case which would seem to confirm this connection. It is to be particularly noted here that, so far as the parent had observed, no eruption or snuffles had existed in her baby. In another case an infant of five months born of a mother suffering from tertiary syphilis had not shown at any time any evidence of syphilis and was an unusually well nourished and healthy child. Examination of the child's blood revealed a positive reaction for syphilis.

This is a class of infants to which I directed attention in a report on two cases of syphilis of the nervous system occurring in children who, so far as obtainable history was dependable, had not shown symptoms of syphilis. The syphilitic character of a cerebrospinal meningitis in one case was revealed by the appearance during the attack of interstitial keratitis, and in the other case, one of cerebral palsy with almost complete amaurosis, an old atrophic chorioiditis existed. As infants with congenital syphilis are liable to all the lesions of the nervous system and other internal organs that a case of acquired syphilis is subject to, the detection of this class of cases whose luetic symptoms were sufficiently insignificant to be overlooked by the parent is all important in order to anticipate and prevent the outbreak of lesions of the viscera.

In another case, a new-born infant, born of a syphilitic mother, whose symptoms first appeared in the fourth month after conception, appeared to be healthy. The child's blood was examined several times during the first four or six weeks of life, and each time it proved negative. The mother's blood serum and milk gave a strong reaction. It seemed probable that this woman contracted her syphilis after conception. In this event, according to Profeta's law, it might be expected that the child would remain immune, and, while our observation had only stretched over several weeks, during this time the serum reaction remained negative and no symptoms appeared in the baby.

It is a matter of interest to note that this test may be made with the breast milk of nursing mothers as well as with their serum. The results with milk are not quite as satisfactory as with the serum, because the milk serum is always more or less turbid. This turbidity of milk serum, unless due allowance is made, may give rise to a false interpretation of the reaction when used in the test and might, therefore, be misleading.

If due allowance, however, is made for this, an examination of milk may be found satisfactory. The advantage of this would be considerable in places where wet nurses are employed, as by an examination of the milk a determination of the non-syphilitic or syphilitic character of the nurse may be determined.

There is nothing more difficult at times to decide than whether a given individual has had syphilis or not. This is particularly true of women who may present such transient manifestations as to have escaped serious attention; or who, on the other hand, may have denied an infection, all evidences of which have disappeared, as is not infrequently the case. In these cases we have heretofore had no really decisive diagnostic recourse up to the present time. Hence the importance of the serum reaction in this class of cases. While it might be impracticable to attempt to estimate the degree of danger of infection through a wet nurse that had latent syphilis, I think no one would hesitate in his decision as to her unsuitableness.

On the other hand, it is no less important to the wet nurse that the infant should not be syphilitic, as was the case in a report by Watson, in which he stated that in Baltimore a nursing mother received from some charitable organization into her own home to board a suckling that proved to be syphilitic. The wet nurse contracted syphilis from the child, gave it to her own infant; and from her own infant her little girl of six or eight years of age contracted syphilis by kissing. This deplorable situation could hardly have arisen had ordinary medical care in inspecting children, before placing them in homes, been observed. As an additional safeguard, however, in all cases the serum reaction might be resorted to, as it was noted above that a child born of a syphilitic mother had been free of all manifestations of syphilis, and still gave a positive serum reaction.

Wet nursing is not as common a practice in our country as it is in some foreign countries. Where it is resorted to, and it can be at times with greatest advantage to the infants, the most rigid inspection of both should be carried out, preferably reinforced by the serum reaction. Success in obtaining the reaction in the milk of syphilitic women led to examining the urine. Blumenthal and Wile reported finding a positive reaction with the urine of many syphilitics, indicating that the substance contained in the blood serum that gives the reaction is not only excreted by the mammary gland, but also by the kidney. Since they found that all urines delay hemolysis and in many instances inhibit in some degree, it is evident that this method is not dependable.

#### INFLUENCE OF ANTISYPHILITIC TREATMENT ON THE REACTION.

Citron was the first to observe that the antiluetic treatment exerted a considerable influence on the result of the reaction. He considered this so evident that he incorporated his views on this question into two laws, as follows:



The longer the syphilis virus has worked in the body, and the oftener it has caused recurrences, the more constant and stronger is the antibody content of the serum.

The earlier the mercurial treatment is started, the longer continued, the more frequently it is repeated, the more advantageous the method of application, and the shorter the interval since the last cure, the less is the content of the antibody and the more frequently the reaction is negative.

While it is not by any means a uniform observation, one is constantly impressed with the diminution in the intensity of the reaction or its complete disappearance in many such cases. Some authors have ventured to give figures indicating the number that have been and have not been influenced by therapy as interpreted from the reaction. These, however, have usually based their observation on more or less limited periods of treatment and, furthermore, fail to consider the persistence of the activity of the infection in internal organs long after it has ceased to show its effect on visible structures.

It is quite noticeable that recent cases of syphilis under rigid anti-syphilitic treatment will often show on examination a lessened intensity or disappearance of the reaction, while old cases with tertiary recurrences appear to show less effect on the serum reaction in similar courses of treatment. This, however, is readily comprehensible when we remember the difference in time that the virus is exerting its effect on the organism and likewise the, in all probability, more deep-seated lesions in the late forms, possibly involving hidden structures. Cases that have been well treated and managed show a positive reaction less frequent than those that have been treated indifferently or practically not at all. While the latter class of cases occasionally may not show a tendency to recurrences, in the main they are disposed to them, and consequently the serum reaction is very likely to be found positive, as it is in the vast majority of all cases with manifestations.

A notable feature in all reports with regard to the effect of treatment on the reaction is that the results have been based on comparatively short periods of treatment. It is more than probable that such results, if obtained after treatment for the usual time that cases of syphilis are ordinarily treated, would show a far greater per cent. of disappearance of the reaction and that we would have in the reaction a reliable index of the cure or abeyance of the affection.

In old syphilitics in whom the manifestations do not seem amenable to mercurial treatment, the serum reaction might be expected to exist. Fleischmann suggests, on the basis of Ehrlich's work with atoxyl in trypanosome infections, that in these cases the virus becomes mercury immune and consequently is unaffected by mercurial treatment. Citron, in his first publication, thought that not only did he observe an influence of treatment in general on the reaction, but also a more pronounced effect in cases under inunction than in those under injection treatment. The observations on this phase of the subject are insufficient to justify a positive opinion.

## DIAGNOSIS.

The diagnostic value of the serum reaction has been placed beyond all doubt. Excepting in the few instances above referred to, a positive serum reaction for syphilis may be looked upon as certain evidence of the patient having syphilis.

The great advantage of a positive means of diagnosis for syphilis will be appreciated by every practitioner of medicine, because of the not infrequent instances in which clinical history and physical examination leaves one unable to decide whether or not the patient has had syphilis. The point should be emphasized that it is positive in from 95 to 98 per cent. of all cases with manifestations. So that, given a case in which syphilis is suspected from the presence of certain manifestations, a positive reaction establishes the etiology; on the other hand, a negative reaction carries considerable weight in excluding it. And by manifestations I refer also to lesions of internal organs in which I personally am most interested. The fact should be held in mind, however, that, while a positive reaction indicates that the individual has syphilis, it does not necessarily prove that the particular lesion from which the patient is suffering is syphilitic. This same point holds good in practically all immuno-diagnostics. They indicate positively, however, a systemic reaction against the particular infection for which they have been tested where the reaction is found. Whether this result may be brought in etiologic relation with the particular condition from which the patient suffers must be decided by clinical data.

## PROGNOSIS.

What interests us particularly in the prognosis is what value we may place on the presence or absence of the reaction in judging (1) the status of a patient, (2) contagiousness, etc.

The intensity of the reaction in different cases varies considerably. It might be of considerable assistance could we judge from its intensity, the mildness or severity of the infection or likewise of the slight reaction or marked virulence of the virus. Any deductions based on the intensity of the reaction would seem to be unfounded, and there is no uniformity with regard to this in different cases so far as one by clinical data could decide. The presence or failure of the reaction, however, permits of conclusions in the majority of cases of vital importance to the patient. Attention was directed to the fact above, that cases with manifestations gave, in the vast majority of cases, the reaction, while in many cases without manifestations, to wit, those that had been well treated, the reaction failed.

Of great importance at all times is the finding of a positive reaction. Where evident manifestations are present, we expect this, but where they are apparently absent a positive reaction should cause us to think seriously on the possible ravages of the virus elsewhere, hidden from view. It is possible that in this class of cases, apparently latent, but still giving a positive reaction for syphilis, we are dealing with changes

in internal organs possibly of minor import or, perchance, of a serious character, attacking, for instance, the nervous system, etc.

If we are justified by a positive reaction to assume activity of the virus, and most investigators are inclined to take this position, then we may possibly have in the serum reaction a means to control our patient's destiny and protect him from the serious consequences of late syphilis of internal organs or possibly the parasyphilitic affections to which some of them are prone, by instituting, if the result of the reaction is positive, vigorous antisyphilitic treatment, and possibly by this means protect him from these visceral and parasyphilitic affections. For this method of control to be effective, however, it would necessitate comparatively frequent examinations of the blood, as there is no means of knowing how long this reaction would remain negative and consequently how long the patient would be protected from the ravages of the disease.

While the present status of this work would not permit any positive statements with regard to protecting the syphilitic from these late forms of syphilis and parasyphilis, the serum reaction is the first thing that promises any possibility of its solution. It has placed beyond all doubt the etiologic relation of syphilis to progressive paresis and to tabes, and it is not beyond the range of possibility that it might enable us to avoid their development in well-controlled cases. No greater responsibility of the profession could be imagined than its responsibility to syphilitics in protecting them from these consequences, and it is to be hoped at least that the serum reaction will enable us to solve this problem. It is self-evident that no statements concerning the contagiousness of syphilis during periods of a negative reaction could be made.

#### THE RELATION OF THE REACTION TO ANTISYPHILITIC TREATMENT.

The significance of the reaction with regard to therapeutics may be summed up as follows:

If we are to accept the reaction when positive as an indication of activity of syphilis, then it follows that a positive reaction is an indication for antisyphilitic therapy. On the other hand, we could not consistently advise its interruption with the disappearance of the reaction, because we know that the disappearance of the reaction and likewise of all specific manifestations may be followed in a shorter or longer time by the appearance of both. I do not believe that we would be justified in awaiting the reappearance of the reaction always before resorting to a systematic periodic antiluetic treatment in a case of syphilis, because the point should be kept in mind that this, like many other immuno-diagnostic recourses, may at times fail.

It has emphasized one point, however, and that is not to await the appearance of external manifestations before instituting treatment, that syphilis is not cured even when the skin and mucous membrane lesions have long since ceased to appear.

In the present light of our knowledge of syphilis, it would seem that intelligent management of syphilitic cases not only demands clinical

judgment, but a far more important factor, namely, the serum reaction for syphilis. Irrespective of absence of all external luetic manifestations, the serum reaction is an indication for antisyphilitic treatment.

In conclusion, I wish to thank Drs. W. T. Mefford and J. P. Long for assistance in laboratory work.

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## THE VALUE OF THE SPIROCHETE IN THE DIAGNOSIS OF SYPHILIS, WITH SPECIAL REFERENCE TO THE PRIMARY LESION.\*

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It is now almost four years since the discovery of the *Spirochete pallida* was announced to the world and, like all new discoveries, it has received its full share of criticism and condemnation, a large part of which was due to the difficulty of staining and the unsatisfactory method of obtaining the organism. We regret to say that there are still many syphilographers in this country who have not accepted the *Spirochete pallida* as the etiologic factor in syphilis. If they have they make no use of it in the diagnosis of the initial lesion and still wait for secondary manifestations before beginning treatment.

With the discovery of the dark ground illuminator, the observation of the different forms of the spirochete have been resumed with renewed vigor. By this method we are able to study the organisms in their original form; here, side by side, we may observe the *Spirochete refringens*, *buccalis* and the *pallida*. Note carefully their size and thickness, their windings and their motility. This was not at all possible with the staining methods. Especially is this true of the *pallida*, which in the stained specimen loses its characteristic windings. It is little wonder that the different forms simulated each other closely, and as a consequence the difficulty of differentiating the various forms was well nigh impossible.

The diagnosis of the chancre at the present time should be based upon a laboratory diagnosis. This consists of the immediate finding of the spirochete in the lesions. The diagnosis of the later manifestations of syphilis should be made by the serum test of Wassermann.

The demonstration of the spirochete by means of the different staining methods is recognized as very unreliable and should be replaced by the examination of the living organisms by means of the dark ground illuminator. There are still some pathologists who cling to the antiquated methods of staining for the demonstration of the organism. These men are reluctant to give up the old methods for the new. Any observer who has had the opportunity to see the demonstration of the

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\* Read before the Chicago Medical Society Jan. 20, 1909.



living organism can see its vast superiority over the staining method and its *immense immediate clinical value*. With this method we are no longer dependent upon the skill of trained pathologists, as the finding of the organism by this method is as uncomplicated as the simple staining of the gonococcus by methylene blue. The method of obtaining the material is as follows:

After we have carefully cleansed the suspected lesion and gently irritated it by means of a cotton swab, we have an abundant exudation of serum. This is collected in capillary tubes and is ready to mount. It is but a few moments' work to prepare our slide. Mount the specimen and examine. Scarcely five minutes need be consumed in the procedure. In chancres, condylomata and mucous patches where no treatment has been given the specimen abounds in organisms. In those cases where the primary lesion has been treated with a dusting powder or salve containing hydrargyrum, it is but a simple matter to puncture the inguinal glands and demonstrate the organism.

During the past eight months we have examined 150 cases, including chancres, condylomata, mucous patches, papules and inguinal glands. In no single instance where we have demonstrated the organism has the subsequent course of the case shown our diagnosis to be wrong. So confident are we in regard to its specificity that we must reiterate our previous conclusions:

1. That the spirochæte is the true cause of syphilis, and its presence is equivalent to the diagnosis of syphilis, but its absence does not rule out syphilis.

2. By means of this method the spirochæte may be demonstrated in all primary and secondary lesions of syphilis if the search is persistent.

Since we have been making our diagnosis from the primary lesions, the question has often been asked: What is the value of the early diagnosis of syphilis, and what is the harm in waiting for the secondary eruption before beginning treatment? This answer is, indeed, obvious.

If we had a severe pus infection of the finger we would not wait for systemic invasion before attacking the primary focus. The same is equally true of syphilis, although there are some that will argue that at the time of the appearance of the primary lesion the infection is already systemic. Neisser has shown in his experiments upon monkeys, in a few cases, the presence of the spirochæte in the bone marrow with the simultaneous appearance of the primary lesion, but the majority of his experiments tend to show that the organism does not make its appearance in the blood stream until 10 to 21 days after the appearance of the chancre.

In the light of the modern investigations of syphilis, to neglect our diagnosis until the system has become invaded by the spirochæte is to do our patients an injustice. It is our duty to make a diagnosis as soon as possible and to begin our treatment before the system is thoroughly saturated with the organisms of syphilis. Some observers contend that to begin treatment so early predisposes to the parasymphilides, as patients

so treated are prone to make light of their disease, and after one or two courses of hydrargyrum to conclude that they have had sufficient treatment. This, in a measure, is true, but it is our duty to explain the condition to our patients, show them the benefits of persistent treatment after symptoms have disappeared. If such a procedure is carried out, the relapses will be less frequent.

With the discovery that the primary lesion contains such large numbers of spirochæte, the question arises, What is our disposition of the chancre? Since the time of Ricord excision of the chancre has been practiced by many surgeons, some claiming that at times they were able to abort syphilis. It must be conceded by all now that this is out of the question.

But such observers as Lukasiewicz,<sup>1</sup> Jadassohn<sup>2</sup> and others claim that by excision of the chancre, if done before the period of second incubation, our infection is attenuated. It certainly is reasonable to suppose that, if we have a large area that is constantly feeding the system with infecting organisms, that area should be removed, especially since its removal does not entail any serious effects upon the patient.

Acting under the previous conclusions, wherever it is at all possible, without undue loss of tissue, we have removed the chancre. In those cases where the lesion is so situated as its removal would cause extensive destruction of tissue, we have been satisfied with thorough cauterization and curettement. To justify our procedure, we have examined the excised chancres by means of the Levaditi method and found them all swarming with organisms.

As all the manifestations of syphilis, whether cutaneous or visceral, are characterized by the collection of colonies of spirochæte, and as it is our custom to administer hydrargyrum to cause the destruction of the same, we believe we are following a rational therapy when we remove in mass our first known collection of spirochæte, that of the chancre.

In order to get these patients under the influence of mercury as soon as possible, our practice is to begin treatment at once, our aim being to annihilate the spirochæte before they have time to become desseminated.

#### CONCLUSIONS.

First.—The greatest value of Shaudin's discovery is that it enables us to make a positive diagnosis from the primary lesion.

Second.—All primary lesions show the *Spirochæte pallida*.

Third.—We believe that the diagnosis should be made from the primary lesion.

Fourth.—After the spirochæte have been demonstrated in the primary lesion, only harm can be done in waiting for other manifestations before beginning treatment.

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1. Polish Zeitschrift Dermatology and Veneriologie, 1907, M. 7 and 8.

2. Archives Dermatology and Syphilis, June 19, 1907.

## CONGENITAL SYPHILIS.

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(Abstract.)

Dr. I. A. Abt, Chicago, said that a considerable number of syphilitic infants, apparently well at birth, die of marasmus before the end of the first year. Babies with congenital syphilis show a high mortality. No primary lesions occur. For this reason it is assumed that the disease very soon takes on the character of a severe general infection, and for the same reason it is thought that the virus of the disease must diffuse itself rapidly. Levaditi, Verse and others found it possible to demonstrate *spirochætæ* regularly and in large numbers in the organs of syphilitic infants. Many experienced clinicians doubt the occurrence of congenital syphilis years after birth without the occurrence of early symptoms, believing that the early symptoms were overlooked. Congenital syphilis is almost at once a general disease, and for this reason the lymph glands do not play the part that they do in acquired syphilis. The lymph nodes are seldom involved to any great extent, but the visceral organs in congenital syphilis are very soon involved. Hochsinger makes the point that circumscribed gummata are far less frequent than diffuse infiltration of organs in congenital syphilis. The skin lesions occur, for the most part, later than those of the internal organs. Children are not born with this skin condition. It usually occurs at the fourth week, or later, and does not occur after the first year. It is observed that the skin at the site of this lesion is smooth and glossy, due to the tension produced by infiltration of the underlying skin. The second form of skin lesion characteristic of congenital lues is pemphigus. The most frequent and characteristic localization is the palms and soles, though other parts of the body may be involved.

The author discussed the causal relation of congenital syphilis to rickets, the joint affections which belong to the early period of congenital syphilis, the muscle changes in congenital syphilis, the changes which are observed in the heart, the changes in the vascular wall in congenital lues, and the lesions of the lungs in this condition. He further pointed out how congenital syphilis attacks the mucous membrane of the nose, gastrointestinal tract, the liver, the nervous system, kidney, testicle, spleen, the thymus, etc.

Referring to the statistics of Castens, who examined 791 cases of congenital lues, it was found that the liver was involved 597 times, the bones 496 times, the lungs 408 times, and the spleen 384 times. A considerable gap occurred at this point, showing the kidneys to be involved 150 times, the pancreas 93 times, the brain 72 times, and the female genital organs, muscles and intestinal tract each once.

Referring to the inflammatory processes, Castens found 1,671 instances of interstitial and 38 instances of gummatous inflammation, showing that interstitial inflammation is the typical pathologic change

in congenital syphilis. Particularly characteristic for the syphilitic processes of the new-born infant is the fact that the changes in the various tissues and organs proceed from the vascular degenerations. This is borne out by all of the histologic and statistical studies.

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## Symposium on Eugenics

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### ON SOME LAWS OF HEREDITY.\*

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The nature of the individual man or woman is dependent upon two factors—hereditary endowment and environment. I shall confine my attention to the first of these, believing that it is of primary importance in its bearings on the subject before us.

#### THE MATERIAL BASIS OF HEREDITY.

By heredity we mean the fact that an individual resembles its ancestors. Such resemblance has its basis in the material out of which the individual is formed. But every new individual has its beginning in the union of two reproductive cells—an egg cell furnished by the mother and a sperm cell furnished by the father. Of the two, the egg is enormously larger, but its influence on the nature of the offspring is no greater. In heredity transmission the two parents share equally. This fact indicates that a large part of the egg consists of substance non-essential to heredity. Indeed, we have reason to believe that there is no relation whatever between the mass of the reproductive cell and its influence in heredity. Heredity perhaps consists chiefly, if not exclusively, in the transmission of enzyme-like materials which initiate certain metabolic processes in a suitable medium represented by the food materials of the egg. On this view the mass of the hereditary substance is of no consequence whatever, since it contributes nothing to the end-product, but only sets going certain chemical processes. The nature of the end-product will depend upon what processes are set going and in what order.

#### THE REPRODUCTIVE CELL SINGLE, THE INDIVIDUAL DOUBLE.

Regarding the reproductive cell as an assemblage of initiators or “determiners” of metabolic processes, we are led by several distinct lines of evidence to consider each such reproductive cell, whether egg or sperm, as containing in general a complete set of all the determiners necessary to form an individual of the species. If so, the ordinary individual contains two such sets, since it has been produced by the union

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\* The substance of an address delivered Jan. 27, 1909, at a joint meeting of the Physicians' Club of Chicago and the Chicago Medical Society.



of two different reproductive cells. From the standpoint of heredity, therefore, if we regard the reproductive cell as single, the individual is double. This conception of the individual as a duality receives the fullest confirmation from breeding experiments with animals and plants alike. In illustration of the point I will cite some experiments with small mammals.

#### MEDEL'S LAW OF HEREDITY.

If a pure-bred black guinea-pig is mated with a white one, the young produced are all black pigmented. This result seems to violate the principle previously stated, that the parents contribute equally in heredity; in reality, however, that principle is not violated. The white parent has contributed its own character to the offspring, but that contribution is unseen in them, simply because black hides it. For, if the cross-bred black individuals are now mated with each other, the white reappears among their offspring, one in four of which, on the average, is entirely white.

The exclusion of white in a first cross and its reappearance in the following generation accords fully with the principle of single reproductive cell, double individual. Each cross-bred individual received black (B) from one parent and white (W) from the other parent. These, in turn, it transmitted separately on attaining sexual maturity. Each cross-bred female produced eggs, half of which were B and half W in character. Likewise each cross-bred male produced sperms, half of which were B and half W in character. Now the chances would be equal that in fertilization a B sperm would meet a B egg or a W egg, both sorts of egg being numerically equal. By such unions individuals of a second generation would be produced, which would be in nature either BB or BW. But the W sperms on fertilizing eggs of the same two sorts would produce either BW or WW combinations. On the whole, therefore, we should expect three sorts of combinations to be produced, viz.: BB, BW and WW, and these in the numerical proportions 1BB:2BW:1WW, or three combinations containing B to one containing W alone. But since, as we have seen, when black is joined with white, it excludes white, there should be three black individuals to one white one, the proportions observed in the experiment. Further, of the three blacks, one (BB) should breed true, transmitting always B, while two (the BW individuals) should transmit to half their offspring B, to the other half W. Breeding tests of the black individuals show this also to hold good in actual experiments.

The foregoing case illustrates a simple but fundamental law of heredity, first discovered by an Austrian naturalist, Gregor Mendel, and called, in his honor, Mendel's law.

This law of "exclusive" or "alternative" inheritance, in which the excluded character skips a generation, reappearing in the second generation, when suitable matings are made, applies to color inheritance quite generally. Thus in crosses, black and yellow as a rule exclude the less

dense pigments, brown and yellow. In man the brunette type excludes the blonde, and brown eyes exclude blue ones.

But the workings of this law are not restricted to color characters. Hair-length and texture are likewise Mendelian characters in heredity. Long or "Angora" hair in guinea-pigs and rabbits is a character excluded by short or normal hair. In man curly hair is dominant over straight hair. In guinea-pigs an abnormal arrangement of the hair in rosettes is dominant over normal coat, just as in birds abnormal arrangement of the feathers in crests, ruffs and frizzles is dominant over normal arrangement.

Further, the Mendelian characters are not restricted to superficial or skin characters. In man a two-jointed condition of the fingers has been found to be dominant over the normal or three-jointed condition, the abnormality in this case being associated with shortening of certain other parts of the skeleton. This case is the more remarkable because skeletal characters in general seem to be non-Mendelian in heredity. Color blindness, left-handedness and other peculiarities due to abnormal structure of the nervous system follow the law of Mendelian inheritance, as do also numerous pathological conditions, such as hemophilia, known to "skip a generation" or appear sporadically in families.

#### PRODUCTION OF NEW VARIETIES.

It is a singular and important fact that in general one Mendelian character is independent in heredity of every other such character. Thus the length of the hair has no relation to its whiteness or blackness, and its roughness or smoothness has no relation to either its length or its color. This fact makes it possible by means of suitable matings to obtain any desired combination of Mendelian characters and to fix such combinations as racial characters. An illustration will help to make the matter clear.

If a long-haired black rabbit is mated with a short-haired white one, the young will all be short-haired and colored, manifesting the two dominant characters, color derived from one parent and shortness of hair derived from the other. The alternative characters, whiteness and length of hair, are excluded in this generation, but reappear in the next, when four sorts of young are produced, viz.:

1. Long-haired and colored, like one grandparent.
2. Short-haired and white, like the other grandparent.
3. Short-haired and colored, like the parents.
4. Long-haired and white, a wholly new combination.

These four classes are produced, on the average, in the proportions 3:3:9:1, and in each such group of 16 individuals one individual in each of the four classes on the average breeds true.

In general, we may say that if the parents differ in more than a single Mendelian character, then new combinations of such characters will occur among the children or grandchildren (especially the latter) and fixed races possessing the new combinations may be obtained at will. If the parents differ in two characters only, two new combinations of

those characters may be obtained; if the parents differ in three Mendelian characters, six new combinations may be obtained, and if in four characters then fourteen new combinations are possible. Thus it is a simple matter by cross-breeding to produce new varieties of animals or plants which represent new combinations of Mendelian characters. The whole process of producing and fixing such varieties may be completed in two generations from the cross.

To explain the mutual independence of different Mendelian characters, we have only to suppose that each has its basis in a different material body within the reproductive cell.

#### SEX A MENDELIAN CHARACTER.

It is becoming daily clearer that sex itself is a matter controlled by Mendelian inheritance, and that accordingly the observed approximate equality of male and female births among the higher animals is a matter of mathematical necessity, no less than the drawing of equal numbers of black and white balls from an urn containing the two sorts in equal proportions. This view of sex inheritance is greatly strengthened by the recent discovery of several cases in which a particular Mendelian character is associated with one sex, but not with the other. In such cases we must suppose that the determinant of one sex has in some way become attached to the material basis of the Mendelian character in question, so that one is not inherited without the other.

#### HIDDEN FACTORS, ATAVISM, AND THE ORIGIN OF VARIETIES BY LOSS OF FACTORS.

In certain Mendelian cases two or more independent factors must be present together to produce a single visible effect. The presence of neither factor may be suspected until the other is introduced. Thus it is known that a cross of two white-flowered plants may sometimes produce offspring bearing colored flowers, each white race having contributed a different factor necessary for color production. In this category of cases may be included well-known instances of atavism, the reappearance of ancestral characters as a result of crosses. Thus wild, colored, gray rabbits are produced by crossing black with yellow ones. The yellow parent in this case contributes an unnoticed pattern which converts black into gray. Through this line of discovery the origin of the various color varieties of our domesticated animals has become an intelligible process. The aboriginal or wild coloration is in general complex, and the colors and color patterns characteristic of domesticated varieties have arisen, for the most part, by loss of one or more of the independent Mendelian factors which cooperate in the production of the wild coloration. Thus the gray coat characteristic of wild rabbits (the familiar "cotton-tail" type of coloration) results from the joint action of some eight different Mendelian factors. Black rabbits lack only one of these factors, yellow rabbits lack another, and white ones still another, while blue rabbits and cream-colored ones lack two factors each. Any cross of color varieties which will bring together in one individual

all the several factors found in a gray rabbit will, of course, produce a gray rabbit by "reversion," that is, by a process of synthesis. In this way it has been found possible to produce and fix wild-colored varieties of rabbits and guinea-pigs, using only the simpler color varieties found in domestication.

#### THE LAW OF BLENDING INHERITANCE.

But not all heritable characters conform with the law of Mendelian or alternative inheritance; another important class of cases is governed by what we may call the law of blending inheritance. This is well illustrated in a cross between races of rabbits which differ in ear length. The offspring in such cases, when full grown, have ears which approximate closely the mean of the ear lengths of the respective parents. In a case in which the ear lengths of the parents were 8 inches and 4 inches, respectively, the ear length of the offspring was approximately 6 inches, which same condition was regularly transmitted by them to a second generation of offspring. In a back-cross also of the rabbits having 6-inch ears with the long-eared ancestor, offspring with intermediate ear lengths were again produced; in this case the ears were approximately 7 inches in length. In a back-cross of the same lot of (6-inch) rabbits with the short-eared ancestor, offspring with ears of intermediate ear length were again obtained; in this case the ear length was approximately 5 inches, the mean of 6 and 4.

The linear dimensions of the skeletal parts of rabbits follow the same law of blending inheritance. In consequence the offspring have both skeletal dimensions and skeletal proportions which approximate closely the mean of the corresponding parts in their respective parents.

As regards total body weight and the volume of the bones, the offspring in cases of blending inheritance fall below the arithmetic mean of the parents, as we should expect. For if we compare two spheres whose diameters are 2 and 4, respectively, with a third sphere whose diameter is 3, we shall find that the volume of the third is not the mean of the volumes of the other two, though such was the relation between their diameters. Rather the volumes will be as  $2^3:3^3:4^3$  or as 8:27:64.

It seems clear that with the foregoing explanation body size conforms with the law of blending inheritance and further study should enable us to predict with a fair degree of accuracy the body size of individuals resulting from a particular mating. The practical value of such knowledge to the animal breeder is obvious. Already through a knowledge of the two laws of Mendelian and of blending inheritance he can predict fairly well what the character of the offspring will be in a considerable variety of particulars. A knowledge of hereditary processes is a first step toward controlling them.

#### INTERMEDIATE TYPES OF INHERITANCE.

Between fully alternative and fully blending inheritance we can recognize intermediate types, in which there is neither complete blending nor complete segregation of the contrasted characters brought to-



gether in a cross. Such, for example, is the case with polydactylism in the guinea-pig. A cross between an established polydactylous race (four-toed) and a normal one (three-toed) produces young sometimes with fairly well-developed extra toe, sometimes with very imperfect extra toe, and sometimes with no extra toe at all. The next generation shows a similar diversity of conditions. Extra toes are produced of all grades of development except the highest, both by individuals having extra toes and by those which lack the extra toe. In such cases it is evident that modification of the contrasted characters has taken place as a result of crossing, but this modification is less extensive than in blending inheritance.

It is plain that in such cases heredity units are concerned, but their behavior is not strictly Mendelian, i. e., accompanied by dominance and segregation. It seems probable that in blending inheritance also heredity units are involved, but their behavior is different, and the breeder will do well to treat them in a different way.

#### SUMMARY.

To sum up our conclusions, in all forms of inheritance alike, each parent makes, as regards every separately heritable character, a unit contribution to the offspring. Consequently the offspring are as regards every character twofold, or dual, organisms. When the offspring, in turn reproduce, they transmit the conditions which they received from their parents; they transmit those conditions separately in alternative inheritance, blended in blending inheritance, and partially separate, partially blended in other forms of inheritance.

#### APPLICATION.

Now, what applicability, we may inquire, have the principles which we have been discussing to the practice of animal breeding? Should they cause the breeder to modify his accustomed methods of procedure? Not materially in most cases, though occasionally improvement in method will be found possible.

Some breeders, in attempting to improve existing varieties of domesticated animals and plants, depend exclusively upon selection, others upon cross-breeding and selection combined. Both methods of procedure are warranted, but in different cases, by what we know concerning heredity. In the case of a blending character, which it is desired to improve, such, for example, as ear length, size or weight, what would be the advantage of cross-breeding, when every cross would bring about the permanent loss of half the improvement already gained? In such a case, selection of the best individuals in each generation without crossing out of the breed would be the only rational procedure in attempting further to improve the race. But if it were desired to combine a blending character, such as long ears in rabbits, with some character found in a different race of rabbits, then a cross between the two races would be necessary as a first step in the process, even if it resulted in impairment

of one or both characters desired. These characters would then need to be improved again, either by selection alone, or by further crossing with one parent form or the other, followed up by selection.

If the characters which it is desired to combine in one race conform with Mendel's law in heredity, the entire process of producing and fixing the new combination may be completed within two generations, but not all individuals of the second generation will breed true to the combinations of characters which they manifest. Here is where selection must come in to single out individuals which will breed true.

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## STUDIES OF INHERITANCE IN THE EVENING PRIMROSE.\*

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CHICAGO.

It might appear that the botanist could not contribute directly to the solution of the problems of heredity in man. But since the processes of heredity show a wonderful uniformity, both in mechanism and results, throughout the plant and animal kingdoms, data derived from the study of variability and inheritance in plants may be applied to problems concerning man himself. While the special problems of eugenics resulting from man's civilization and social development are foreign to the plant breeder, yet, inasmuch as man is an organism, studies based on plants can contribute to an understanding of the phenomena of heredity in man equally with those based on animals.

Professor Hugo DeVries, of Amsterdam, Holland, was the first to make a prolonged study of the evening primrose. He found it growing wild near Amsterdam, where it had escaped from gardens. The species concerned is called *Oenothera lamarckiana*, and it showed a remarkable range of variability. Professor DeVries found that these plants continued to exhibit this wide range of variation, a number of types arising from the parent form and breeding fairly true to their particular type. When the seeds of *O. lamarckiana* were sown in quantity about 1 to 5 per cent. of the plants developing from them belonged to one of the new types.

This process DeVries called "mutation," and chiefly on his studies of the evening primroses, extending over many years, he founded his mutation theory of evolution, which may be very briefly stated as follows: This is the general method of species origin in Nature, new forms originating suddenly and breeding true from the start, these jumps or saltations replacing the slow and gradual Darwinian process of natural selection. Each of the new types presents a series of new unit characters which were not present in the parent species.

In order to explain the sudden origin of new unit characters, DeVries made an assumption which to many of us seems unjustified.

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\* Abstract of an address given before a joint meeting of the Physicians' Club of Chicago and the Chicago Medical Society, Jan. 27, 1909.

namely, that at some time in the previous history of the mutating species representatives of these new units had made their appearance in some mysterious manner in the germ plasm. My own studies of these plants have led me to the opinion that this assumption is wholly unnecessary and that the phenomena concerned may be more reasonably explained in another manner. I have gradually come to view this process of mutation as one of analysis in which each of the new types or mutants is lacking in some character or set of characters which the parent form possessed. This view places quite a different evolutionary value on these phenomena.

According to this view, all the mutants, with one exception to be explained later, are considered as originating through the loss of characters. Even in the case of *O. rubrinervis*, which DeVries cites as a progressive mutant, while there is no apparent loss of characters, experimental studies have also shown that there is no reason for assuming that anything new or additional has been acquired which was not present in *O. lamarckiana*.

In the case of *O. gigas*, another "progressive mutant" of DeVries', it is also believed to be a false conception to say that additional characters have suddenly appeared in its germ plasm, for this mutant differs from all the others I have studied in that it has double the number of chromosomes present in the parent form, *O. lamarckiana*. *Gigas* has lost no characters, but seems to have merely had a duplication of the chromosome set present in *O. lamarckiana*.

Several series of facts support my view that the mutants, with the exception of *O. gigas*, have arisen through a process of analysis, different sets of characters being lost from the germ cells giving rise to each mutant. The peculiar phenomena of hybridization among these forms are simply explained on this basis. When two mutants are crossed, the parent form, *O. lamarckiana*, appears in the first generation of hybrids, in addition to both the mutants. These two results—first, that the mutants themselves breed true when self-pollinated and never revert; second, that when crossed they produce the parental type, *O. lamarckiana*, at once, but never any type showing new synthetic characters—are both easily explained if we suppose that each of the mutants was lacking in a different set of characters which the parent possessed. This principle will also explain some of the well-known cases of reversion on crossing cited by Darwin and others.

The Mendelian type of inheritance described by Professor Castle appears also to be due to a process of analysis, and in many cases, as in mice and rabbits, coats of various colors seem to have arisen by the loss of different factors which were present in the ancestral form.

It is probable that certain cases in man, such as a predisposition to particular diseases, can best be explained as due to the loss of certain factors in the inheritance. This statement of a few of the facts of mutation in the evening primroses gives a glimpse of the general viewpoint growing out of these results. An entirely different line of work led me toward the same conclusion I have already stated to you, and, in

fact, furnishes a further basis for it. This is a study of the structure of the germ cells of these forms, to find out if there was any microscopic or cytologic basis in their nuclei for the sudden origin of these new types. These studies have shown that there is a basis for the sudden origin of the new types, in the behavior of the chromosomes in the germ cells at the time the latter are formed. Owing to this peculiar behavior, occasional irregularities occur in the pairing of the chromosomes at the time the germ cells are produced. The number of chromosomes remains constant, but certain germ cells will, nevertheless, be entirely deficient in a particular kind of chromosome. A germ cell lacking both members of a given type of chromosome (one derived from each parent) would be lacking in the ability to produce the corresponding set of characters. Thus we have a possible basis for the sudden appearance of apparently new sets of characters in the evening primroses, which are, however, believed to be due to the loss and not to the addition of anything.

This view of mutation as a process of analysis is equally valid whether it be based upon the chromosome distributions or considered entirely apart from these phenomena. It seems probable that much species-formation may have taken place in this manner by an analytical process in which certain factors are lost from the germ plasm of the parent species. But this evidently can not be the only evolutionary factor, for quite a different set of forces is necessary to account for the origin of new organs and for the steady progression in complexity which has taken place so many times in the evolution of the plant and animal kingdoms.

Another study in quantitative inheritance concerns the amount of red pigment present in the sepals of the flower buds of *Oenothera rubrinervis*, a mutant having red streaks on its sepals. The extent of this color pattern shows a wide range of variability, and in some cases at least the offspring of an individual show the same amount or extent of pigment as their parent form, i. e., they breed true to this purely quantitative difference. This shows that some initial difference in the germ cells determines their capacity for producing a certain amount or extent of pigment in the adult individual developed from them under given conditions.

Some recent work seems to indicate that the different coat colors of mammals are due to different stages of oxidation of a single melanin pigment. If this is the case, then Mendelian inheritance resolves itself into the inheritance of purely quantitative differences. Some quantitative factor of the germ cell determines that the oxidation of this pigment shall stop in the adult individual at different points in different cases, giving, for instance, a black mouse in one case and a yellow one in another.

A knowledge of the inheritance of purely quantitative differences is, therefore, more important than ever before, because many apparently qualitative differences may in the last analysis prove to be purely quantitative. A knowledge of the inheritance of quantitative differences in man would be valuable from the standpoint of eugenics.



LIGHT THROWN UPON EUGENICS BY THE EXPERIENCES  
OF ANIMAL BREEDING.\*

E. DAVENPORT.

Dean of the College of Agriculture, University of Illinois.  
URBANA.

The writer does not pose as an authority in eugenics, because his experience has been confined to the improvement of plants and animals. Whatever he may say, therefore, in the larger field will be subject to the risks we always run in reasoning from one species over into another in matters of hereditary behavior.

However, the principle is well established that in general all species, both plant and animal, obey the same general laws of descent, even though they differ in minor particulars. We are further encouraged in their application to man by reason of the fact that the exhaustive studies of Galton in the stature of English people, as shown in his famous regression table, constitutes a display of hereditary transmission with which all races substantially agree so far as heredity and variation have as yet been studied.

This table is here reproduced in full, reference to which will teach more facts of inheritance than will any similar and equal body of figures ever published.

In this table the statures of children as adults are compared with those of the parents from which they are descended, the heights of the children being noted along the top and those of the mid-parent<sup>1</sup> down the left. The three columns on the right give the number of adult children descended from parents of different heights (Column 16), the mean or average height of each lot (Column 18) and the number of families represented in each (Column 17). From this table some exceedingly important deductions can be made, particularly as it seems to afford a typical picture of how heredity works, whatever the race or the character in question. As we study this, therefore, we may substitute any character of any animal, as speed in horses, or any other character in man, as, for example, moral character, musical ability or sense, physical defect or criminal tendencies.

1. Parents of all sorts, whether tall or short, good or bad, produce some offspring better than themselves (as taller), some that are worse (as shorter), but a larger number not far from the standing of the parent.

2. If the parent is above the average of his race, his offspring will average high, but many individuals will be near the lower limits of the race (see, for example, row e in table).

3. The exceptional individual may arise either from the exceptional parent (see row c) or from the mediocre parent (see row f).

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\* Read before joint meeting of the Physicians' Club of Chicago and the Chicago Medical Society, Jan. 27, 1909.

1. By mid-parent is meant the average height of the father and mother after increasing the mother's height by 1.08 because women are on the average 12.5 per cent. shorter than men. All female heights in the table are in the same way transmuted into male.

NUMBER OF CHILDREN OF VARIOUS STATURES BORN OF 205 MID-PARENTS OF VARIOUS STATURES\*

	1 Heights of Mid- parents.	Heights of Adult Children.												16 Number of Adult Children.	17 Number of Mid- Parents.	18 Means of Children.
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a.	Below..	Below..	62.2	63.2	64.2	65.2	66.2	67.2	68.2	69.2	70.2	71.2	72.2	73.2	Above.	†
b.	Above..								1	2	1	2	7	2	4	5
c.	72.5..								3	5	10	4	9	2		6
d.	71.5..					1	3	4	3							11
e.	70.5..	1		1		1	1	3	12	18	14	7	1	3	3	22
f.	69.5..						17	27	20	33	25	20	11	4	5	11
g.	68.5..	1		1	16	4	16	25	31	18	21	18	1	3		49
h.	67.5..			7	11	15	36	38	28	38	19	11	4			211
i.	66.5..			3	5	2	17	17	14	13	4					78
k.	65.5..	1		9	5	7	11	11	7	7	5	2	1			66
l.	64.5..	1	1	4	4	1	5	5		2						23
m.	Below..	1		2	4	1	2	2	1	1					14	1
n.	Totals..	5	7	32	59	48	117	138	120	167	99	64	41	17	14	928
o.	Means†		65.6	66.8	67.8	67.8	67.7	67.9	68.3	68.5	69	69.1	70.2	70.2		68.08§

\* Galton, Natural Inheritance, p. 208.

† Error. Manifestly four children could not have five mid-parents (See author's footnote.).

‡ Row o shows the mean heights of the mid-parents producing the children of the corresponding column. For example, 67.8 (column 6) is the average height of parents producing 65.2-inch children.

§ Excluding everything above 72.5 and below 64.5 in mid-parents, and everything above 73.2 and below 62.2 in offspring. If these values are included at the next measurement to the last given, the means become 68.1 and 68.7 respectively.

4. More exceptional individuals arise from mediocre parents than from exceptional parents, but it is because the number of mediocre families is high (41) as compared with the exceptional (6).

5. The proportion of exceptional individuals is vastly higher from exceptional parents than from mediocre parents.

6. Whatever the parentage, there will always be a portion of the race that is decidedly inferior in respect to any given character.

When these facts are taken into consideration, together with the known facts that characters are seldom perfectly correlated, we arrive at the conclusion that with exceptional parents some of the offspring will be exceptional individuals, but also that, whatever the parentage, many individuals will be inferior in respect to many or even all essential characters, and are known as degenerates. We infer from all this that the offspring of superior people will likely, but not necessarily, be superior; that the offspring of degenerates will mostly be inferior, and that the offspring of mediocrity will, on the whole, be mediocre, with some exceptional and a few degenerates.

Now, animal breeding aims at two distinctly different objects, arrived at by almost opposite methods:

1. The promotion of a few exceptional individuals, like race horses, prize animals and fancy stock generally.

2. The raising of the general average of the breed without reference to exceptional preferences, as with feeding cattle, for example.

In the first case only exceptional individuals are used for breeding purposes. Even then, as we would infer from the table, only a portion of the offspring is exceptional, but of that portion *a few will be even better than their exceptional parents* (see the table where we have offspring taller than any parents). This is progression and accounts for the two-minute trotter and the thousand-pound cow—records that can be attained by but one in every million.

Some of the advocates of eugenics would imitate this procedure with humans, if possible, not realizing, I am convinced, that we secure the same results in good degree in every-day life through preferential mating. Men and women do not, as is popularly supposed, "choose opposites." On the contrary, their choice results in a correlation of about 0.28; that is, to this extent tall people tend to marry tall, short tend to marry short, musical tend to marry musical, good tend to marry good, and bad tend to mate with bad, a result due, in part, to preference and, in part, to association. To about this extent, therefore, we secure in humans the same results as in animals and by the same methods.

To go beyond this natural result of preferential mating, we should be obliged to apply to our marriage laws of the best people such restrictions as would dangerously interfere with the deepest human instincts, in which attempts we should either fail or else we should blot out of the race its choicest asset and most valuable character—love.

Now, it is not necessary to resort to the extreme selection practiced in animal breeding in order to secure substantial results. This is for two reasons: first, the one of preferential mating just mentioned; the

other is that, as we have already seen, *exceptional individuals arise in large numbers from mediocre parents*. It is upon this principle that democracy rests when it declares that it is safer to elect rulers from the masses, thus choosing the exceptional man, than it is to accept hereditary rule, with the certainty that now and then the monarch will be a degenerate, no matter what the family.

This brings us to the imitation of the second practice in animal breeding—the raising of the mass without reference to exceptional individuals of whom we are likely to have sufficient by forces already at work. In this method we resort in practice to breeding from the few rather than from the many, but for purely economic reasons and to gain time; that is, in mass improvement we get the same results by breeding from a restricted number of the better individuals or by excluding the lower limits of the race, except that the more we exclude the faster we progress. For economic reasons the animal breeder excludes the greater share because he desires to have as few as possible below the medium. Evidently we can not do this with humans without an amount of interference that is undesirable, but we can accomplish the same results in a little longer time by absolute exclusion of the degenerate, or, as we say with animals, the skulawag or the cull.

This will call for some changes in our dealings with the criminal, which are too antiquated for an enlightened civilization. Our laws decree that if a man does certain acts he shall be taken away from his family and shut up for a longer or shorter time where all his associations shall be with criminals, but upon release we let him loose with unrestricted freedom. If he be a degenerate, that is, a born criminal, he will shortly be back in prison where he may spend half his life and yet get more children than half a dozen normal men. If he is not a degenerate, he “reforms,” but we have damned his name and his descendants for generations, all to no purpose.

All experience in breeding indicates that the reason and purpose for the restraint of the criminal is not reform, but the safety of the public against his depredations now and the reproduction of his kind hereafter. The question for the courts to determine is, therefore, whether the man is by heredity a criminal, and, if so, then he should be separated from society, not temporarily, but, like the dangerously insane, forever, because, like the leopard, he will not change his spots, because he can not.

When this once comes to be followed, then the race will rapidly rise and we shall reduce, though we never shall be able to obliterate, the degenerate. When that time comes we shall have fewer in our prisons and we shall cease making criminals out of normal average men by reason of enforced evil associations and lost hope.

This, in my opinion, is about all we can do in the way of “breeding” the human animal, and it is more than most people realize, for if we segregate and prevent the reproduction of the degenerate, on the one hand, and depend upon the educated preferential mating, upon the other, the human race should rapidly and indefinitely improve.



To conclude, I can not approve the oft-proposed interference with the marriage relations of normal people. Any mistakes they make will be blotted out mechanically and will not permanently weaken the race or greatly hamper it at any given moment. But I would deal differently with the criminal class and take every opportunity to eliminate them from the possibility of reproducing their kind when once adjudged to be degenerates. In other words, I would not tamper with the normal men and women in their marriage relations, but I would deal differently with our degenerates by inquiring more sharply into the real nature of the criminal, and I would adjudge him upon that nature as determined upon evidence before a competent court rather than to judge him by a single act which may or may not indicate his hereditary nature. In a word, I would begin the improvement of the human race by the elimination of the degenerate in every way possible through the action of our criminal court, and that, in my opinion, is about as far as we shall ever get in eugenics—at least without sacrificing more than we can hope to gain.

## DISCUSSION.

Dr. Charles L. Mix:—I think we, all of us, both individually and collectively, are to be congratulated on the fact that we have been able to hear so much in one short evening bearing upon the general subject of heredity. By heredity I think we understand merely a general principle. It is really a word which expresses a genetic relationship between successive generations of animals. Heredity in itself is not a theory; it is merely a word used to express a relationship. A word which we are more particularly interested in as physicians is inheritance.

At the very beginning of our life as a fertilized ovum, our inheritance or heritage and our organism are identical structures. Of course, as soon as cell-division takes place, our heritage is divided among all of the cells of our organism as it develops. Now, in this first cell there are what have been spoken of to-night by Professor Gates, a large number of chromosomes. The number of chromosomes, as he stated, in any given species, is the same for the whole group of animals in that species. In man the number of chromosomes, as well as somatic cells and germ-cells, is always twenty-four. It seems to me that the Weissmann theory of heredity, the theory by which the germ-cell is supposed to contain the particulate units which make up our character is the right one; and, as Dr. Gates has said, in the twenty-four chromosomes are embodied most of these particulate units of character. It is perfectly evident that when the twelve chromosomes of the sperm unite with the twelve chromosomes of the ovum, we can get all kinds of mixtures. If we figure up by the laws of algebra the number of chances by the unions of twelve different sets of chromosomes, with twelve other different sets of chromosomes, the number of possible combinations runs up into the millions. That easily explains to us why there is a steadfast tendency towards variation among individuals. It could hardly be otherwise, and we can easily see that if we have a predominance of some particulate characteristics in some individuals we will have the dominant characteristics appearing in their offspring.

Dr. Gates spoke on the *œnothera Lamarekiana*. He did not say what he might have said, that in this particular plant De Vries found an opportunity which he had long before sought, without any possibility of gratification. He did not tell you that this Dutch professor, living near Amsterdam, had examined over a hundred plants before he finally came upon one which was in a state of mutability, and this one particular plant he found in a potato field. He found two species in the process of evolution. He found the original parent form. He found also an elementary species which he named the *œnothera brevistylis*, because of the short style which it possessed, and another form *œnothera laevifolia*, so named

because the leaves were smooth. He had found a beautiful example of what was long before called by Geoffrey St. Hilaire saltatory evolution, or evolution by leaps and bounds in contradistinction to the gradual process of evolution by fluctuation or varieties, which is the theory of evolution as we find it in Darwin.

You know, there is another theory of evolution called Lamarckianism, which is simply in a general way what is called in German *anatomische und physiologische Anpassung*. It is the adaptation of the individual to a particular environment or to a particular function. This last theory presupposes the possibility of the inheritance of acquired variations. It is something which personally I do not believe in. I do not think there is any chance for the inheritance of an acquired variation. The inheritance or heritage which we have must be innate, and lies, so far as can be told, in these chromosomes themselves. Can these chromosomes in any way be influenced? They can be influenced, as we know in the case of these evening primroses. The *Oenothera Lamarckiana* was practically a weed in that garden. A weed is nothing but a plant which under a new environment breeds with remarkable intensity, of which it is incapable under its old environment. This plant, which originated in America, was found growing in Holland practically in the form of a weed, in a condition of great mutability, and ready for all sorts of changes, and several elementary species, seven or eight in number, were evolved from this particular plant and found to breed true.

I wish now to change my subject somewhat abruptly. There are two varieties of wheat, as regards immunity to rust. There is a variety of wheat which is immune to rust, and there is a variety which is not so immune. If you cross these two varieties the dominant characteristic is found to be a lack of such immunity, so that the seeds formed of the union of these two forms show usually the dominant characteristic, a susceptibility to rust, with a recessive characteristic, an immunity to rust. This recessive characteristic comes out in these seeds in the proportion of one to three, and if the recessive characteristic is bred true, one can easily perpetuate the seed of the variety of wheat which is perfectly immune to rust.

Is there any possibility by which in the case of the human race immunities can be taken advantage of when they exist in chromosomes? I do not believe that there is any possibility of creating these things. When they occur, they occur usually as spots, that is, freaks, which are properly taken advantage of by the breeder. We readily believe, of course, in the survival of the fittest, but we have no means of telling how to bring about the arrival of the fittest. If we could do that we would have the whole problem easily solved. But that is impossible. It is not, however, a chimerical dream to hope the time may come when we may find that there are some particular breeds of the human race that will be discovered to be immune to certain diseases. It will be hard to make this discovery; it may be a dominant, or it may be a recessive characteristic. It is questionable whether we will be able to breed it, whether there will be any opportunity offered by which it can be done. Yet it is being done, I think, almost without our knowledge. Let us take the statistics of measles and its mortality. The mortality from measles, according to statistics taken from England for two hundred years back, shows conclusively to us as physicians that the disease at the present time is far milder than it formerly was. Is it not probable that during the course of these two hundred years there has been brought about some change in the germ-plasma, perhaps by a sudden or saltatory variation, by which immunity has been in part acquired by some particular strain, which has then permeated the whole mass of English inhabitants? Is it not likely, also, that the same thing is true with regard to the disease called syphilis? Those of us who are familiar with the history of the disease know that it was, at its origin, an extremely fatal malady. I am somewhat of the opinion, from what I have read in regard to this disease, that it was brought into Europe from America. It is stated that the skulls of some of the aboriginal South American races show cranial syphilis. A thought which occurs to us is whether or not this disease,

which appeared in Europe at the time of the return of Columbus and was prevalent among the Spanish sailors, has not been attenuated during the course of the three or four hundred years following. All of us are familiar with the old pun, that "The human race is becoming more syphylized as well as more civilized." I think that this is probably more than a pun; it is an explanation of a real fact, and I think the reason for the existence of the fact, as I conceive it to be, is the appearance of a strain of the human race which to some extent is immune to this disease. This strain of diminished susceptibility or of immunity has in time spread through large numbers of the human race, so that the lessened susceptibility of the individual of to-day can be explained to some extent by the history of the past.

The law of Galton in regard to ancestral relationship has been referred to tonight by Dr. Davenport, when he said that 95 per cent. of Mr. Jones would be bad if his great-great-grand-parents were bad. It is a fact, which can be worked out with mathematical precision, that the offspring of two parents contains one-half of the characteristics of the parents, one-fourth the characteristics of the grand-parents, one-eighth the characteristics of the great-grand-parents, one-sixteenth of the great-great-grand-parents, and so on, back. In fact, if we want to make a proper estimate of a given individual, all we have to do is to examine his parents, his grand-parents and his great-great-grand-parents, and we will be able to arrive at a fairly good estimate of his present status.

There are other questions which I hesitate to say much, if anything, about. One question, which is interesting to me, is the law of heredity as influenced by sex. We are all familiar with the general law of heredity which appears in hemophilia. The mother seldom shows hemophilia. The sons do. The daughters' sons do not. The grandsons of the daughters do, and hemophilia comes out in the male in alternate generations. Why this is I do not know. I know that there are cases of "hereditary optic atrophy" which show this law of inheritance, and this law has been worked out in a large number of nervous diseases. What is inheritable is the defective germ plasma, which probably is defective in the same proportion as all the somatic cells of the body are defective, and this germ plasma being defective, it is not a strange thing that nervous tissue, the most highly organized, and therefore the most prone to degenerate, should be the first tissue of the body to show degenerative changes. It is not strange that there should be such conditions as Friedreich's hereditary ataxia, showing the law of inheritance as modified by sex. It is not strange that the offspring of parents, who are guilty of indiscretions in the use of alcohol, should show changes in the nervous system, such as epilepsy and insanity, because it is likely that at the time of mating of these parents there was a marked defect in the general nutrition of the germ plasma. It is not, then, in these instances an inheritance of a specific disease which we have, but it is the inheritance of a disease tendency.

As to the question of predisposition, heredity and immunity, I am of the opinion that immunity can not be inherited. I regard immunity as an acquired characteristic. Smallpox does not confer immunity. Your father had it; you will get it if you have not been vaccinated, and are exposed to it. His acquired immunity does not do you any good. And the converse is true. If we can not have immunity inherited, how can we have predisposition inherited? We talk about inheriting a predisposition to tuberculosis. I am absolutely of the opinion that there is no such thing possible. What we do inherit in this case is a tendency towards degeneration, or a tendency towards disease, and we will get *that* disease to which we are most exposed. One hundred years ago it was smallpox that might have been thought to be inherited; to-day it is tuberculosis. It is not a question of the inheritance of a specific disease; it is a predisposition toward disease in general, the inheritance of bad germ plasma and of a poor lot of chromosomes. If we pay more attention to our eugenics, our eugenics will take care of themselves.

CLINICAL REPORT OF THE REAPPEARANCE OF THE ONCE  
COMMON AND FATAL MILK SICKNESS OR "MILK-  
SICK," WITH SUCCESSFUL RATIONAL TREAT-  
MENT DEDUCTED FROM CLINICAL FINDINGS.

W. E. WALSH, M.D.

MORRIS, ILL.

When the early settlers came into Ohio, Indiana and Illinois, there were many deaths among the cattle and people along certain creek and river bottoms from a disease called "milk sickness." As the timber land was cleared off the disease gradually disappeared, and is now only found in dry seasons in certain shaded places along certain creek bottoms, the localities in this section being very definitely fixed by the past history. The disease was so prevalent in early times that the settlers would run the cattle and heat them up before killing them for beef, to see if they would develop the symptoms called trembles, because often the cattle would show no symptoms of being sick until they had been stirred up and heated by vigorous exercise; then they would gradually lag, become shaky and tremble, fall down comatose and generally died. If the attack was severe, the animal would go into the deep shade and would act delirious and would very often attack anything that disturbed it. Milk cows seldom showed any symptoms, but their milk would infect hogs, dogs and people who drank it. Sucking calves invariably died, while their mothers with the sickness would live. Horses seldom died. People are usually infected through eating the butter or drinking the milk, rarely through eating cheese or the meat from the infected animal. In the last six years we have had over twenty cases, with three deaths. The infections came from two small areas of ground, one about forty acres and the other less.

REPORT OF CASES IN LAST INFECTION.

CASE 1.—Nov. 20, 1908, at 4 p. m., was called to see a boy, 4 years old, that had been sick with vomiting and in a partial stupor since morning. The first thing noticed was the peculiar sweetish odor in the room, such as is often found when a patient is seriously sick with diabetes. The child laid limp in bed, hollow-eyed, the pupils dilated, face shrunken, extremities cold, temperature 97, pulse 108 with good quality. It was very difficult to arouse the child and make it drink water. The history was that the child had not passed large quantities of urine and had not been thirsty, nor had it had excessive appetite, except the day before, when it had eaten almost excessively for dinner. The child went to bed apparently well and had started to vomit about 4 o'clock in the morning. The mother had given castor oil with no results and stated that the child had passed very little urine.

On inquiry it was found that other members of the family had been sick. The father, 50 years of age, had been ill for a week, commencing with sickness at the stomach, but no vomiting, also a girl 18 years of age, had been sick a week ago with vomiting and was still weak and tired, especially in the legs. Slight sweetish odor was found in the breath of both the father and the girl, and after it was found that they had obtained their butter from a family whose cows grazed in a pasture where milk-sickness had been among the cattle two years before and also that members of the family from which they purchased their butter had been similarly sick, a diagnosis of milk-sickness was given.



Large doses of castor oil were given the boy and his colon was flushed every two hours with normal salt solution. This was continued until the next morning, when there was a very free evacuation of offensive fecal matter with mucus. Colon flushing was reduced to three times a day and saline given. The urine was examined and found to contain no albumin, but gave a reaction for diacetic acid. The boy continued in this condition for four days, when he seemed, all of a sudden, to awaken and get interested in his surroundings. His temperature was continually subnormal, except on the fourth day of his illness it was  $99\frac{2}{5}$  under the arm. The sweetish odor disappeared from his breath in about one week and for four weeks more he was apparently well. About this time he both ate and exercised freely, after which he was taken down with the same sweetish odor, subnormal temperature, prostration, constipation, thirst and vomiting. Bicarbonate of soda was given freely and the boy made a very rapid recovery and has since been well.

CASE 2.—On November 8 a child in the same family, 8 years of age, had a slight vomiting, weakness of the knees, pains in the legs, headache and prostration, but had been given a free catharsis by the mother, and physician was not called. The patient was better in four days and went to school and continued at school for about two weeks, and on November 25 she had a ravenous appetite for dinner. She went to school and became heated playing at recess; she stated that she could hardly get up stairs in school, as her knees were weak and she had a headache. The child vomited every hour during the night until 4 o'clock in the morning, when she told her mother goodnight and told her to go to bed. The mother attempted to arouse her at 6, but could not and the gravity of the case was not recognized until 8, when we were first called, and found the child deeply comatose, the same symptoms as the boy, only more pronounced. The pupils were widely dilated, extremities cold and labored breathing, pulse 116, with fair quality, temperature taken in the rectum  $97$ , unable to swallow without strangulation, breath strongly sweetish. Colon flushing and abdominal massage were resorted to, but to no result. Small doses of adrenalin and strychnin were given. The child died at 12 o'clock, apparently of respiratory failure. Pupils were firmly contracted during the last hour.

CASE 3.—Two days after the death of Case 2, the mother took down violently sick with vomiting and great prostration, pains in the stomach, constipation, headache, subnormal temperature and fast pulse. Following the treatment of diabetic coma, dram doses of bicarbonate of soda were given every hour or immediately after vomiting. Ounce doses of castor oil were also given, but usually ejected. An enema containing four ounces of bicarbonate of soda were given. After about the sixth dose of soda she stated that she felt better, "as if a load had been lifted off her," as she expressed it. She continued better. Urine obtained about twelve hours after this treatment commenced was still highly acid and gave the reaction for diacetic acid and had the odor of acetone. The acetone disappeared from the mother's breath in about three days. Mother continues well.

CASE 4.—During all this time the father continued to go about with the odor of acetone in his breath. He had no albumin in the urine, but asserted that he lost flesh rapidly. His appetite was good at times, and was the only thing that relieved the craving pain in his stomach. These pains were along the border of the ribs. He had pains in the limbs and great weakness upon attempting to go upstairs. Strychnin  $1/30$  was given every six hours. His condition seemed to be the same from day to day, and the attack lasted for about four weeks, with apparent recovery. Acetone and diacetic acid were found in his urine during the attack. He is still debilitated.

CASE 5.—A girl of 18 was taken sick with vomiting, pain in the bowels and weakness of the legs, but recovered in about three days with no special treatment except a free catharsis. She continued at work and had slight relapse in two weeks, but still is in very poor health and constipated. Soda was given at intervals.

CASE 6.—A young man, aged 17, living in the country where the butter came from, had been very tired and weak while husking corn. He had some medical attention, but no diagnosis was made until after the above cases developed, when he became quiet, stayed around the house and practically took treatment for five weeks, in which time he had gained back his flesh and felt good and started in vigorously to husk corn. He husked all day, felt tired at night and the next morning commenced to vomit. When seen, had a sweetish breath, a subnormal temperature, vomiting, pains in the abdomen, restlessness and thirst and constipation the same as in other cases. Bicarbonate of soda was given in large doses and the man recovered in about four days.

CASE 7.—The father of Case 6 had been ill for about four weeks. He had slight sweetish odor to his breath and had acetone in the urine. He was weak, but had never vomited. He had pains in the limbs and back, more particularly along the border of the ribs. He was haggard looking and had lost weight. At present report is still feeling poorly.

Six years ago we had another epidemic with two deaths, both dying of coma immediately after taking exercise. The hired man where the infection was had apparently recovered completely and walked four miles to town to see the doctor, came home and died the next day. His employer became much agitated and looked after the details of the funeral. He took sick and also died three days afterward. A postmortem, in association with Dr. Sippy, of Rush Medical College, found all the organs to be fatty, and a bacillus, resembling colon bacillus, was found by him in all the organs and in the blood. Guinea-pigs and rabbits were injected with the blood with no results. Portions of the muscle of the leg were fed to a dog. The dog was unfortunately used in a laboratory experiment by mistake before it had time to develop symptoms.

A postmortem was also held on the body of Case 2, with Dr. Harris, of the University of Chicago, who, with Professor Jordan, has made an extensive study of milk sickness. Specimens and cultures from all the organs were taken, including the brain. The same pathologic findings as above were found, and it was noticed that there was an enlargement of the lymphatic glands of the mesentery and swelling of Peyer's patches. There was a large quantity of mucus in the upper part of the small intestine. Drs. Jordan and Harris have since reported that they have the organism, which is an anaërobie, spore-forming bacillus resembling tetanus. They named it tentatively *Bacillus lacti morbi*. This bacillus is supposed to exist in small areas of soil in shaded portions of creek bottoms. The mode of infection from the ground to the cattle has not been definitely fixed. Whether from the dust or scourings of worms or from the ingestion of an infected insect it is not known. The clinical appearance of a case, when severe, resembles somewhat diabetic coma, and it was with this suspicion that the diacetic acid was looked for in the urine, and the treatment for the acidosis suggested alkaline treatment with bicarbonate of soda.

#### POINTS BROUGHT OUT IN THIS LAST EPIDEMIC.

First, that a patient might be slightly sick and recover apparently completely and yet, from the effects of violent exercise or overeating could relapse and die in coma, especially following violent exercise.

Second, the length of time from the first attack till complete recovery takes place is not known, but must be over six weeks in some cases. It is not known whether it is a reattack or whether the production of the organism is favored when the demand for oxygen exceeds the natural supply, as in overeating or violent exercise.

Third, the presence of acetone in the breath and diacetic acid in the urine indicate pushing bicarbonate of soda or some alkaline.

Fourth, that albumin was only found in the urine in the cases of those seriously sick. Former records state it existed in all cases.

Fifth, that the probable cause of the new outbreaks is the loss of fear for the infected district on account of cattle not being infected during the wet seasons, which is the rule, dry seasons being the exception in this section.

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## THE SANATORIUM—ITS INFLUENCE AND VALUE.\*

J. W. PETTIT, M.D.

OTTAWA, ILL.

In the discussion of this topic we may take it for granted that the state should make provision for its tuberculous poor; this not only as an act of humanity, but for its own safety. Four years ago when an attempt was made to secure a state sanatorium I was an enthusiastic supporter of that measure. In view of subsequent developments and an opportunity to study the situation more thoroughly, I now doubt, for the present at least, the wisdom of this plan. By accepting the state as the unit of representation adequate provision will not be made. Such a plan concentrates the responsibility where it will not be felt and has a tendency to the establishment of unwieldy and unnecessarily expensive institutions.

State sanatoria have largely failed in their mission in several states because of a too lavish expenditure of money, the failure to secure suitable cases for treatment, and the introduction of partisan politics in their management. Massachusetts was the first state to provide a public sanatorium in this country. Thousands of dollars were expended in the construction of massive buildings which are not only unnecessary but tend to defeat the object in view. For a few years and while under the control of the able and enthusiastic direction of the men who had influenced its establishment, the work done was very creditable. Within the past few years, however, it has come under the baneful and blighting influence of partisan politics and is now controlled by influences which threaten its future usefulness. In New York selfish political interests have been a blight upon the sanatorium of that state from its very inception. It is badly located, illogically constructed, expensively conducted, and the management is in such a turmoil of discord that its usefulness, to say the least, is seriously impaired.

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\*Read at the Annual Meeting of the Illinois State Medical Society, May 19, 20, 21, 1908.

With such examples as these before us will it not be wise for us to hesitate to commit ourselves to such a plan, especially in this state where our charitable institutions have for many years been dominated by spoils politicians and are not yet sufficiently removed from these influences to warrant the establishment of a new institution which may also become a football of politics?

A visit to the leading sanatoria in this country will convince the most casual observer that any attempt to carry out the treatment according to the standards set by the institutions to which we naturally look for guidance must fail, because of the enormous expense attending their construction and maintenance. For example, four of the leading charitable institutions in this country have cost approximately \$1,250,000 and accommodate about 500 patients or less. This is a per capita cost for equipment alone of about \$2,750, which is expended for housing a class of patients who should not be permitted to live in a house except of the simplest construction, and certainly should not sleep between massive walls no matter how constructed. This irrational method grows out of the fact that the medical men who are supposed to have directed and controlled their construction and management have practically nothing to say, and the physicians in charge are quite as much opposed to this extravagant and unscientific method as those who are in a more independent position to criticize. These institutions are for the most part simply an expression of the vanity of the rich and should not be accepted as models for our imitation. This is extremely unfortunate, and especially just at the present time when the demand for these institutions is so great that there is danger of the whole system being broken down by this unnecessary expense. It may be said with some appearance of reason that it is nobody's business if certain rich men desire to give expression of their vanity by building expensive sanatoria, but it certainly does concern the general public when it is attempted to follow their example in the construction of institutions which must be built at public expense or by numerous private subscriptions. As an illustration of the slavish adherence to the expensive and unscientific method which it is my purpose to condemn I call attention to the fact that the city of New York has decided to build a sanatorium for charity patients costing \$2,000,000 which will accommodate only 800 patients. Two millions of dollars properly expended should be made to accommodate eight times 800 patients, and to the decided advantage of the patients themselves. When we look over the field and see the lavish use of money expended in the name of sweet charity providing accommodations that even the well-to-do could not afford if these institutions were conducted as business enterprises, is it not enough to cause us to look about for other and more rational methods?

The building of these expensive sanatoria has had a very discouraging influence upon those who are seeking to make provision for this class of invalids. State commissions appointed to investigate conditions necessary to the establishment of these institutions are discouraged when they find that from \$1,500 to \$6,000 per capita has been expended in existing



sanatoria—an expenditure which they are led to believe is demanded. In a neighboring state the commission appointed to investigate the cost of building a sanatorium, after visiting the leading institutions, were about to make an adverse report because of an insufficient appropriation when their attention was called to a more simple and logical plan. They had \$75,000, which in view of their investigation seemed hardly enough to make a decent beginning. By adopting a more rational and economic plan they now have a full-fledged institution in successful operation entirely within the limits of their appropriation.

Then, too, there is but little demand for a state sanatorium. In view of existing conditions this may seem like a strange statement. I venture the prediction that if this state, with its estimate of 20,000 to 25,000 consumptives, had a sanatorium of 200 beds it could not be filled with suitable cases. Under present conditions early cases can not be secured. We must first educate the public to believe in the curability of tuberculosis, to what extent, and under what conditions, before we build expensive sanatoria, and in the meantime teach the necessity for and how to make an early diagnosis. In other words, we must create a demand before we undertake to supply an assumed need which does not exist. To build large and full-fledged sanatoria is a mistake. Growth should be natural. The sanatorium idea is a result of an evolutionary process. England first called attention to the underlying principles of treatment. The Germans have systemized it, and it now remains for us to simplify methods and thus make it more scientific and economic. Let us have a clearer understanding of what we are undertaking to accomplish before we proceed further. Thus far we have been advocating the establishment of public sanatoria on the plea of their therapeutic value. This is too narrow a view, and if based on this plea alone the result under present conditions will be disappointing and lead to a reaction against the sanatorium idea. Its real value is not alone in the number cured, which will vary according to the class of patients admitted. Each patient cured demonstrates the curability of the disease. Those who are not, the necessity for early diagnosis, and all, whether cured or not on their return to their homes, are zealous in preaching the doctrine of fresh air, hygienic living and the prevention of the disease. If each cured patient does not save the life of at least three others his life was not worth saving.

Theoretically all tuberculous cases should be cared for. This will come about in due course of events. For the present, however, we will not be able to secure an appropriation except for curable cases. This is the plea which has been made in other states where sanatoria have been established, but they have found to their disappointment that in order to keep their beds filled they were compelled to take advanced and far advanced cases, thus converting institutions which were designed for the curable simply into a refuge for the incurable. This has a tendency to discredit the whole sanatorium movement, and in our zeal we should not complicate the situation further by multiplying these mistakes. It is our duty rather to profit by them and by proceeding in an orderly and intelli-

gent manner place the sanatorium in its proper relation to this problem by meeting the demands of the situation as they arise.

I am fully persuaded that local sanatoria as provided by the Glackin law is far more economic and will result in making provision for a much larger number and thus be more effective. Where local hospitals exist sanatoria can be conducted under the same management, thus reducing the cost of administration, which is no small item. A King lean-to or a few tents costing only a trifle are enough to install any local sanatorium in connection with a hospital. This plan is elastic and can be made to meet the immediate demands of any community (unless it be the city of Chicago) and enlarged from time to time to meet an increased demand with no loss of what has been done and with but little additional expense.

The plan of local sanatoria has at least the merit of economy and can be put into operation without delay. If it does not work out in practice as is hoped and believed, no great mistake will be made and the failure will assist in pointing the right way. By all means, it should be tried, and in the meantime further attempts to secure an appropriation for a state sanatorium should be abandoned. The time may come when the demand will be so great that separate institutions will be required, but this will not be until the sanatorium idea has been generally accepted as the most rational and necessary. This will not occur until the profession and public more fully realize that treatment outside the sanatorium is as a rule a failure. The economic feature of the local sanatorium is the strongest argument in its favor, for however much we may plan or theorize, the final analysis of this whole question is one of dollars and cents.

Let us keep in mind that the chief value of the sanatorium is educational. To reap this advantage to the fullest extent we should place the sanatorium in each community. In other words, instead of taking the people to the sanatorium, take the sanatorium to the people. The influence of these institutions is not only destined to prevent and cure tuberculosis but modify our views in regard to the treatment of other diseases. It will also influence the future construction of our hospitals and homes along more rational and economic lines. These influences will be more largely felt by taking the sanatorium to the people.

Many a laudable undertaking has failed because of misdirected enthusiasm and ill-tempered zeal. Let this not be written of us who are responsible for the success or failure of this new departure, which not only involves the interests of our own unfortunates but those of other states as well. Our success will assist in solving a most perplexing problem; our failure will render its solution more difficult and perplexing. If we have a realizing sense of our responsibility and meet it with both caution and courage there is no doubt of our success, for the plan is rational, and only hastily-formed or ill-advised schemes can make it a failure. Enthusiasm and zeal must be properly directed to be effective. Much of our energy and resources have been wasted by taking it for granted that the problem, which is really very complex, is easy of solu-

tion. We should carefully consider any proposed method before undertaking to put it into effect. No action should be taken to provide a sanatorium in any community until there is sufficient public sentiment behind the movement to support it when established. Any attempt to force provision for the tuberculous patient ahead of public sentiment will not only result in the failure of the movement but loss of confidence which it will be difficult to restore. Sentiment, enthusiasm and vanity have been the dominating factors thus far in the building of sanatoria. What we need is more philanthropy, common sense and the application of business principles. We need the softening influence of sentiment, the motive power of enthusiasm, but vanity has no place in the scheme.

This whole question must be considered from a business standpoint and conducted on business principles. Just in proportion as we depart from business methods in the conduct of these institutions, just to that extent do we impair their usefulness and invite failure. It is not possible except on the most extravagant scale to provide for even a majority of these sufferers; therefore, it is the duty of those most prominently identified with their care not only to devise inexpensive methods but to firmly oppose the present tendency to extravagance and lavish display which characterizes all of our leading sanatoria.

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#### HOW SHALL WE APPLY THE NEW ANTITUBERCULOSIS LAW? (b) RESOURCES NOT AVAILABLE.\*

EVERETT J. BROWN, M.D.

DECATUR, ILL.

The available resources of the state, county and municipal government of Illinois for the treatment of cases of tuberculosis have always been notoriously bad and inadequate, and it is this fact which has led to the passage of the new law, the application of which is the subject of this symposium to-day.

The state itself has practically never had any means for the exclusive care and treatment of consumptives; at the different state prisons and institutions for the insane, blind, deaf and dumb and the county almshouses, various but necessarily limited special accommodations have been provided for the care of the tuberculous infected state charges, but in some of them the consumptive patients are not isolated but occupy the general wards and are a great menace to the other inmates. It is usually admitted also that in the various penitentiaries a life, or even a long term sentence, is often only a sentence of death from tuberculosis. Of the various county organizations only a very few have any available resources for the handling of the tuberculous sick. Cook County up to the present time has no hospitals exclusively devoted to the care of consumptives, but on April 7 the people voted "Yes" on the \$2,000,000

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\*Read at the Annual Meeting of the Illinois State Medical Society, May 19, 20, 21, 1908.

bond proposition, which included plans for a model institution near Chicago for the incurable consumptives, making other arrangements for their early or middle-stage cases. At present what answers to a "City Hospital"—Cook County Hospital—has about forty beds, twenty for each sex, in a well-built, airy but badly located cottage, which receives patients and cares for them during the time necessary to make a diagnosis, after which the patient is sent to the County Sanatorium for consumptives, which is located on the county poor farm at Dunning and was built for about 200 patients; it is crowded to the limit and is inadequate and inefficient. During 1907 and up to March 28, 1908, the Cook County institutions cared for only 2,805 out of the approximately 8,000 tuberculous patients of the county, or about one-third. Of the 350 tuberculous patients now cared for by Cook County, forty are quarantined at the poorhouse, as beds elsewhere are unavailable. This new hospital for the late cases surpasses all other measures in the fight against this disease, as it limits the contagion by removing the patient from his home, and from the danger of infecting his family and friends.

Further, the Chicago Tuberculosis Institute has now in operation seven dispensaries where ambulant cases are treated and the patients instructed about their disease, and in addition a corps of visiting nurses go to their homes to carry out the campaign of education. Of course, many other dispensaries in Chicago, and in some of the larger cities throughout the state, accept and treat consumptives as they do those suffering from other diseases. The Chicago Home for Incurables also takes a few cases of tuberculosis. In some counties the county poor farm has been made use of for the establishment of day camps, and in this connection I wish to state that it is on the county poor farms with their large acreage that the most splendid locations can be found for the carrying into effect of the provisions of the new law; tent colonies or cheap hospitals could be erected on every county poor farm, not near enough to be a menace to the other inmates, but the plan already in operation would facilitate management and reduce the running expenses. The grounds of the various city hospitals throughout the state could be used under the new law for the establishment of tent colonies. If the people of the state will only properly appreciate the splendid opportunity the new law gives even to the very small communities for the care, prevention and cure of thousands of cases of tuberculosis, which are now under our present means doomed to certain death, the intent of the makers of the new law will be realized. It is a disgrace to the state that in nearly 100 counties of this great commonwealth there is not the slightest provision made for the indigent consumptive, who, being without means for climatic sanatorium treatment, must languish in a home made poverty stricken by being denied the earning power of a father or mother or a grown son or daughter, who in the years of their greatest earning capacity are doomed to many months of invalidism and eventual death. And it is in the smaller towns and rural communities where the greatest opposition will be found when the referendum provisions of the new law are carried out, for it is among the farmers



where the greatest opposition to the levying of the additional taxes is found.

Every small city or country town has many vacant spaces of ground, which could be obtained free of charge, or for a nominal rental, where tent colonies or dispensaries could be established under the provisions of this new law which would be able to treat thousands of indigent consumptives, furnish them with the proper food, and, above all, educate them, and the other members of their families, and through them the community how to live with the disease, and how to prevent its spread. This campaign of education is especially needed in the rural communities, where I have seen several members of a family in more than one instance succumb one after another to this disease after an initial case had thoroughly infected a farm house.

In my own county as in the majority of the other counties of the state there is not a single provision made for the care of a poor consumptive, unless he is in the last stage, and then he can be sent only to the county almshouse; to think of furnishing free advice and treatment to an early or middle stage case among the poor is regarded as a great extravagance by the average county supervisor.

In conclusion, I wish to say that if in each county the local medical society as a body would take up this matter and obtain through the referendum a carrying out of the provisions of this act in their respective communities, many hundreds of cases could be successfully treated, further infection of other people could be prevented and millions of dollars saved to their families and the state thereby.

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#### THE TUBERCULOSIS DISPENSARY AS IT MAY BE ESTABLISHED UNDER THE NEW LAW.\*

ETHAN A. GRAY, M.D.

CHICAGO.

Heretofore the tuberculosis hospitals in this country have been, from motives of high economy, devoted to the treatment and cure of the incipient case, or have served as places of refuge for the dying consumptive. The periods of treatment in the incipient and terminal cases are short—a few months, relatively speaking. But there is a large class of consumptives which can not be submitted to sanatorium treatment except at considerable expense. I refer to the moderately advanced consumptive, the patient who may linger on for two or three years before the end comes, or who may need attention for a year or two before his disease is so checked that he can again become self-supporting. Such cases as these must be treated in another way, and the best way which suggests itself is the combined home and dispensary treatment.

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\*Read at the Fifty-eight Annual Session of the Illinois State Medical Society, May 19, 20, 21, 1908.

Every municipality establishing its sanatorium under the act under discussion will seriously consider the initial and maintenance cost of caring for its consumptives. It will soon be found, upon investigation, that, as above indicated, the incipient or moderately early cases offer the greatest return in the matter of cure—hence the great incentive to treat this class of cases. On the other hand, the late consumptive is a greater danger to the public by reason of his increasing weakness, which renders him less able to observe necessary sanitary precautions. The isolation of such an indigent patient will recommend itself to the student of prophylaxis.

The treatment of the moderately advanced consumptive is a very different proposition. It is difficult to determine how long such a patient will live, for the anatomical changes are not always a sure guide to the degree of severity. Certain patients presenting cavital lesions will remain in a condition approaching arrest for years, being able to perform light work from time to time during this period. It is evident that to house such patients in a sanatorium would be incurring a large and unnecessary expense. These people are usually tractable when carefully instructed and cooperate willingly with physician and nurse, particularly when they are visited at frequent intervals. They can be placed out of doors at home on porch, or roof or in yards. All of this home service lies without the province of the sanatorium proper, and must be referred to the tuberculosis dispensary.

This dispensary is not outside the provisions of the Glackin law, inasmuch as it may be considered to be a part of a sanatorium—the outpatient department, for example. It embraces in its broadest sense the care of the tuberculous individual in his home, and endeavors to apply to his case the same factors which we find in the sanatorium, viz., physician, nurse, instruction and treatment. In addition, and more far-reaching, is a personal study of the patient's resources and a suspension of his daily life; further, routine examination of the other members of a patient's family often reveals tuberculosis in its incipency.

The duty of the dispensary is not at an end when the patient has been advised and instructed. It often happens that the patient in direct need of help is also financially helpless. He lives, perhaps, in a congested district where four-room habitations are frequent and porches and yards are hard to find. In such cases it is manifestly impossible to get results without extending pecuniary aid. Here enters the nurse; her work now consists in finding assistance for the patient. This is often supplied by cooperating benevolent societies. She may find it necessary to remove the family to quarters where the patient can practice out-door living; she may merely arrange existing facilities for the benefit of the patient; in a word, she must see that the patient lives properly and that he is provided with the means to do so. Most of all, the usefulness of the nurse lies in the personal relation which grows up between her and her patients. Add to this the personal interest of the dispensary physician, and there results a powerful influence over a dangerous patient and his sometimes equally dangerous family.

The expense of establishing this dispensary is very small compared with that of the sanatorium. Three rooms, plainly furnished with chairs, desk, screens and examination table, and equally equipped with scales, microscope, reagents and stationary, may cost about \$200. Rent will vary according to locality. Monthly expenses will consist of the last named item, heating, lighting and nurse's salary, the latter, about \$75. The physician is usually left off of the salary list. The dispensary should be located at some central point, easy of access from all directions. If it is designed to care for patients outside urban limits, the means of transportation must be considered. The patient should not be required to travel any great distance because of resulting fatigue and danger of dust infection. Neighboring villages and towns, connected by rail or trolley, may readily combine to establish one central dispensary, dividing the expense of establishment and maintenance. In the case of patients living in outlying districts, the distance from the railway might be a serious obstacle, for the nurse who must visit the patient in his home, as well as for the patient who must visit the dispensary. However, each case is a problem by itself and solutions are usually found.

Without doubt, the principles of hygiene inculcated in patients in sanatoria are far reaching, and the doctrine of open air living is carried to many a conservative village and farmstead by the returning convalescent. The same excellent work is accomplished by the scientific teaching of the tuberculosis nurse.

Briefly, the dispensary is, in the smaller cities, exactly as it is in the larger, a most economical and efficient means of treating the moderately advanced indigent consumptive. The influence is, in my opinion, quite as broad, if not broader, than the sanatorium, by reason of the larger number of patients reached. Especially is this true where house conditions permit of the ideal house treatment.

43 Pine Grove Avenue.

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## PHYSICAL EXAMINATION OF BELOW-GRADE CHILDREN.\*

CAROLINE HEDGER, M.D.

CHICAGO.

Two years ago, with the cooperation of a principal, there were examined physically here in Chicago 208 school children. The whole list given me numbered 250 and represented the children noticeably below grade in a school of 1,100. Some moved away, some went to work, so that the number which I have to report is 208. Into the problem of the below-grade child enter many factors: first, foreign birth and inability to understand what is wanted of him; second, foreign parents who, after the child has learned the language, can not assist him or even understand the problem the child has to meet; third, the existing conditions of the public schools, (a) too many children to one teacher, (b)

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\* Read before the Chicago Medical Society meeting Jan. 6, 1909.

lack of ventilation, and (c) the nervous strain resulting from a multiplicity of examinations: fourth, and perhaps a larger factor than any of the preceding, is the physical condition of the child himself. About this matter little has yet been done compared with what must be done. Dr. Allport and other workers have for years been waging a war to have children's eyes examined. This is a step forward and is being done here in Chicago. The recording on a sheet in the principal's office the details of the gross defects of vision in the children is not enough: the defects must be well corrected and the wasted nervous energy stored up for better things.

The tables of Roach on weight and measurement give an average for children of different nationalities. If as a class the backward children fall below this average (which, at best, may not be normal) in weight, the fact should be known, but knowing is not enough. The below-weight children must have procured for them such environment that not only can their present working efficiency be raised, but that they can be protected from future illness, especially tuberculosis.

The children were, in a small percentage of cases, immigrants, and in a large percentage of cases the children of immigrants, mostly from the peasant class. Bohemians, Polish, Irish, Germans, Greeks were the nationalities represented. It would seem that families so recently imported from the land would show some of the sturdiness that comes from outdoor work. It was not apparent: superficially considered, the children looked spindling and anemic.

On careful examination such proved to be the case; almost every class showed our children to be taller and thinner than the Boston children of the same age. Peckham, who measured Milwaukee children, thinks western children, as a rule, taller for their age than eastern children, but some of our children show a greater tendency to thinness than his. Of course, the small numbers make any absolute deduction from averages impossible, but the figures will bear out the general appearance of the children, Table 1.

Although it was winter, the clothing, as a rule, was scanty and the children bore traces of neglect in the shape of pediculi, more than 70 per cent. of the girls being thus afflicted, Table 4. It may be remarked in passing that two years of medical inspection has reduced this skin disease to about 23 per cent. in the girls of this school. Many of the children were dirty. This can not be ascribed entirely to neglect, but to environment. There are no bath tubs in the houses, less than one to the block at least. The houses are poorly built and draughty. The average wage makes it necessary for many families to eke out their warmth with picked-up fuel; frequent bathing becomes under these circumstances an impossibility.

Approximately 25 per cent. showed defective vision, besides those having external diseases of the eye, Table 9. Most of these eyes had no attempt at correction: the price of glasses even in dispensaries is almost prohibitive, besides a good share of the old prejudice against lenses exists. It was often a matter of wonder that the child had arrived at even the



third grade with the handicap of such vision as was shown. This test was, of course, the rough wall-chart test at twenty feet. The amount of eyestrain in the other three-quarters could not be estimated.

The teeth (Table 2) showed, almost without exception, entire lack of care. Only seven presented teeth without caries. In considering the bearing of this fact on the nutrition of the group as a whole two factors must be thought of: 1. The imperfectly chewed food and resulting malnutrition. 2. The loss of sleep and general wear and tear from toothache which is, of course, common with so many neglected carious teeth.

The high percentage of enlarged cervical glands (Table 1) is probably dependent on several factors, some of which are shown in the tables.

1. Pediculosis, 72.3 per cent. in the girls. 2. Carious teeth, 96.7 per cent. of both boys and girls. 3. Hypertrophied tonsils, 55 per cent. boys, 65 per cent. girls, Table 3. These findings would, of course, give a large number of enlarged cervical glands. Probably some of these glands were tubercular. If the skin vaccination test could be made, as suggested by Pirquet in the last tuberculosis congress, we could estimate much more exactly the menace to the child from this finding. There is another factor not shown in the tables that undoubtedly contributes to the depression of vital force shown by these enlarged glands. This is the vitiated air in which many of the children sleep. The bedrooms in the district are small, averaging about 7x11 feet, and, as a rule, accommodate four or more people. The windows are not opened, and the result is one factor in the condition of the children.

One finding was rather surprising to me, namely, the small number of mouth-breathers (Table 3) with the large number of badly enlarged tonsils. Certainly adenoids are not so frequently encountered as would be expected.

The large number of thyroid enlargements, especially in boys, is striking (Table 1). I have been able to find no figures in regard to this finding in other below-grade children. In so small a number of cases in a neighborhood where goiter is common it may be coincidence.

The hemic murmurs, as shown in Table 6, quite bear out the appearance of the children as to anemia and blood tests outside this group, but in the same class of children average below 70 per cent. hemoglobin. The proportion of transmitted murmurs is exactly the same between boys and girls, and in many cases rheumatism could be found even in the imperfect history given by the child himself. The rapid and irregular pulse may be, in part, dependent on the anemia, but, in part, depends on the universal intoxication of the children by tea and coffee (Table 5). Only two children were free from such intoxication. One of these was a Greek boy who had only been here nine months.

Children 10 years old insist they can not do without tea and coffee. On the other hand, smaller children when milk can be afforded readily give up coffee. The distress of a good Polish mother when, returning from a ten days' outing in the country, the children refused coffee and

demand milk, was pitiful. She had eight children, one tubercular, and supported them by scrubbing. Forty-two cents a day would have given her an inadequate supply, and one dollar a day had to furnish food and clothing, heat and light. Coffee undoubtedly replaces food for most of these children.

Considering the factors brought out in the preceding pages, Table 3 needs little explanation. Given children with a tendency to be below weight for their height, with many carious teeth and diseased tonsils, with findings indicating anemia, with the necessity of replacing food by coffee, with poor ventilation and illy-managed dietaries, this is a good showing of negative lung findings. One child was having pulmonary hemorrhages, one was running a temperature in the mornings when I saw her. Four presented diffuse bronchitis and one was a great sufferer from asthma.

We have here a problem of 208 much below-grade children out of 1,100, nor in this number probably exceptional for industrial neighborhoods, as the school is unusually well managed and the spirit of the teachers fine. We have foreign parents badly housed, and with low wage unable to procure adequate nutrition from the food presented in their new environment, with their limited knowledge and buying power. The management of these children in school demands our attention, and public sentiment must demand the very best care for such children. Manual training, well-ventilated rooms, and small classes, are minimum requirements. It seems ridiculous to expect those with defective vision to take successfully work they do not see or see at great expense to their nervous systems. The real center of the problem is the nutrition of the child. Sir John Gorst gives testimony that below-grade children forge ahead after eighteen months of proper feeding, while another author, Hrdlicka, puts the case more strongly when he says: "A child who could not be improved by better food and better hygienic surroundings is a very rare exception; an inveterate backwardness in learning is not noticeable except in a few instances. The English law demands that the child be fed, whatever the causes of his malfeeding, as in this way alone can they make citizens who will have enough stamina so that they will not become dependent. This demands a radical readjustment of wage and rent. In the meantime some things could be done that would not involve parental responsibility or fix heavy burdens on the community at large.

1. Keep up a continual campaign of education in ventilation and nutrition, an extension of such work as was done so effectively by the health department of Chicago for sick babies last summer. Pamphlets in foreign languages embodying advice and simple recipes of nutritious and cheap food.

2. Cooking classes for parents at evening schools.

3. Country schools for the pretubercular.

4. As an immediate aid to our problem of the below-grade children I should like to present for your consideration the sale of milk in school buildings at 1 cent per glass, the milk to be sold by ticket exclusively, so that, if necessary, charitable institutions could supply supplementary

diet for a child without comment from the other children. The price per glass would cover practically the cost of the milk; the labor would be inconsiderable, the equipment simple. We could in this way successfully compete with the school store and the unspeakable paper lunch bag. We could, for 2 cents a day, supply 400 calories, while the parents would consider it only supplementary feeding and would not relax their efforts to supply three meals a day.

It is a fact that in families with insufficient dietary the children are given pennies to spend, perhaps with the thought of giving some pleasure in a cramped life. If this expenditure could be utilized in nourishment at cost without the stigma of charity, physical improvement would result. In addition, financial advantages can be urged, as in New York it has been estimated that the below-grade children cost the public school fund a half million dollars yearly.

TABLE 1.—EXAMINATION OF GLANDS.

125 Boys.					
	S.	M.	L.	Total.	
	No.	%			
Enlarged cervical glands.....	104	1	7	112	89.6
Enlarged thyroid.....	27	1	1	29	23.2

83 Girls.					
	S.	M.	L.	Total.	
	No.	%			
Enlarged cervical glands.....	70	0	9	79	95.1
Enlarged thyroid.....	15	2	1	18	25.3

TABLE 2.—TEETH.

125 Boys.					83 Girls.				
Age.	No.	Good.	Medium.	Bad.	Age.	No.	Good.	Medium.	Bad.
8	12	1	5	6	8	10	2	4	4
9	8	2	3	3	9	9	3	3	3
10	17	3	8	3	10	11	2	4	5
11	25	8	13	4	11	9	3	2	4
12	32	13	9	7	12	19	9	7	2
13	19	8	5	4	13	13	4	7	2
14	11	3	3	5	14	9	5	3	1
15	1	..	1	..	15	3	1	2	..
Totals		38	47	32			29	32	21

Good means 1 medium or 2 small cavities. Medium means 1 to 3 large cavities. Bad means 4 or more cavities. Seven had teeth free from cavities.

TABLE 3.—RESPIRATORY TRACT.

Boys.								
Age.	No.	Mouth. Breather.	Hyper- trophy Tonsils.	Laryngitis.	Lungs.			Cough.
					Positive.	Suspi- cious.	Negative.	
8	12	0	7	1	1	6	5	1
9	8	1	7	0	4	2	2	1
10	17	2	7	0	3½	7	7	1
11	25	3	17	0	4	11	10	3
12	32	1	18	0	6	11	15	2
13	19	0	9	1	4½	8	7	1
14	11	1	4	1	1	4	6	1½
15	1	0	0	0	0	1	0	0
Totals.125		8	69	3	23	50	52	10
Per cent.		6.37	47.2	2	18.4	40	41.6	0.8

## Girls.

Age.	No.	Month Breather.	Hyper- trophy Tonsils.	Laryngitis.	Positive.	Lungs. Suspensions.	Negative.	Cough.
8	10	1	8	0	1 <sup>†</sup>	7	2	2
9	9	1	5	0	0	6	3	3
10	11	0	10	1	2	4	5	0
11	9	0	7	0	2	4	3	2*
12	19	0	11	0	3	8	8	3
13	13	1	7	0	1	4	8	2 <sup>‡</sup>
14	9	0	4	0	1	1	7	3
15	3	0	2	0	1	2	0	0
Totals.	83	3	54	1	11	36	36	15
Per cent.		3.6	65	1.2	13.4	43.3	43.3	18

<sup>†</sup> One case of bronchitis.

<sup>‡</sup> Asthma.

\* One of these had morning fever; the other lived in a house where there had been tuberculosis.

One or both tonsils are involved in this hypertrophy.

Suspensions indicates a single well-marked finding such as prolonged expiratory murmur with high pitch.

Positive indicates two or more confirmatory signs of consolidation.

TABLE 4.—SKIN DISEASES, ORTHOPEDIC DEFECTS.

Skin Diseases.	125 Boys. No. of Cases.	83 Girls. No. of Cases.	Orthopedic Defects.	125 Boys. No. of Cases.	83 Girls. No. of Cases.
Pediculosis .....	50	60	Curvature, slight...	11	9
Ringworm .....	1	0	Curvature, median...	12	23
Impetigo contagiosum .....	0	1	Curvature, bad...	2	1
Tinea versicolor .....	0	1	Winged scapula.....	10	4
Eczema Chr.....	0	1	Pigeon breast.....	0	1
			Scoliosis .....	0	1
Per cent.....	40	72.3	Per cent.....	28	47

TABLE 5.—TEA AND COFFEE.

	Tea.	Coffee.	Both.	Tea, Times per Day.			Coffee, Times per Day.		
	Once.	Twice.	Thrice.	Once.	Twice.	Thrice.	Once.	Twice.	Thrice.
Boys (125) .....	69	83	72	34	26	13	32	41	33
Girls (83) .....	65	68	52	13	8	17	9	7	16

TABLE 6.—HEARTS.

Boys.				Girls.			
Age.	No.	Irregular Pulse.	Hemic Murmurs.	Age.	No.	Irregular Pulse.	Hemic Murmurs.
8	12	2	5	8	10	1	4
9	8	2	4	9	9	3	5
10	17	2	8	10	11	1	3
11	25	8	14	11	9	3	5
12	32	7	17	12	19	3	7
13	19	5	7	13	13	4	7
14	11	2	7	14	9	1	1
15	1	1	0	15	3	0	1
T't'ls.125	29	62	14	83	16	30	9
Per cent.	23.2	50.4	11.2		19.2	36.1	10.8

TABLE 7.—COMPARISON BETWEEN ROACH'S AND AUTHOR'S MEASUREMENTS—HEIGHT, WEIGHT, CHEST.

Boys.							Girls.						
Height.			Weight.		Chest, Inches.		Height.			Weight.		Chest, Inches.	
No.	Age.	In.	Author.	Roach.			No.	Age.	In.	Author.	Roach.		
12	8	47.76	47.76	53.81	53.81	22.65	10	8	47.21	47.58	49.11	51.56	21.87
8	9	48.9	49.69	56.08	59.00	22.9	9	9	50.08	49.39	51.61	57.	23.11
17	10	52.37	51.68	64.6	65.16	24.55	11	10	52.95	51.34	61.45	62.23	23.72
25	11	53.55	53.53	68.3	70.04	24.63	9	11	53.75	53.42	57.94	68.70	24.33
32	12	56.21	55.11	76.70	86.75	25.83	19	12	56.50	55.88	78.30	78.16	25.56
19	13	56.86	57.21	83.03	84.67	26.51	13	13	58.07	58.16	81.90	88.46	25.93
11	14	57.97	59.58	86.34	94.49	27.12	9	14	60.25	59.94	92.7	98.23	27.97
1	15	59.25	.....	90.	.....	26.	3	15	60.3	.....	95.	.....	29.08



TABLE 8.—SUMMARY—125 BOYS; 83 GIRLS.

	Boys. Per Ct.	Girls. Per Ct.		Boys. Per Ct.	Girls. Per Ct.
Cervical glands .....	89.6	95.1	Negative lungs .....	41.6	43.3
Goitre .....	23.2	25.3	Suspicious lung findings....	40	43.3
Hypertrophied tonsil .....	55.2	65	Positive lung findings.....	18.4	13.4
Irregular pulse .....	23.2	19	Cough .....	8	19
Hemic murmurs .....	50.4	36.1	Pediculosis .....	40	72.3
Transmitted apical murmurs.	11.2	10.8	Bad teeth .....	25.6	25.2
Lateral curvature .....	20	39.7	Tea and coffee.....	99.1	100

TABLE 9.—EXAMINATION OF EYES.

Boys Examined—52.				Girls Examined—38.			
Line Read at 20 ft.	With Right Eye.	With Left Eye.	With Both Eyes.	Line Read at 20 ft.	With Right Eye.	With Left Eye.	With Both Eyes.
Blind.....	..	1	..	Blind.....	..	..	..
200.....	..	..	..	200.....	..	1	..
100.....	4	4	1	100.....	4	2	2
70.....	3	2	..	70.....	1	2	..
50.....	4	6	1	50.....	4	2	2
40.....	6	3	..	40.....	1	1	..
30.....	5	4	1	30.....	3	9	..
20.....	4	6	1	20.....	4	..	..

A child with normal vision should, when placed at 20 feet, read the line marked 20 with either eye

	125 Boys. No. of Cases.	83 Girls. No. of Cases.
Subjective fatigue .....	19	11
Blepharitis marginalis .....	2	2
Two-colored iris .....	1	1
Strabismus .....	2	0
Opacity of cornea.....	0	2
Cyst of lid.....	1	0
Conjunctivitis .....	4	2

TABLE 10.—EXAMINATION OF EARS.

	125 Boys. No. of Cases.	83 Girls. No. of Cases.
Earache .....	8	3
Suppurative otitis media.....	7	2
Tender mastoid .....	6	2

# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF THE ILLINOIS STATE MEDICAL SOCIETY.

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APRIL, 1909.

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## THE ILLINOIS STATE MEDICAL SOCIETY AT QUINCY.

THE PROFESSION OF THAT CITY ALIVE AND ENTHUSIASTIC OVER THE  
PROSPECTS OF A RECORD-BREAKING ATTENDANCE AT THE  
MEETING, MAY 18, 19 AND 20, 1909.

The people and profession of Quincy are looking forward with a good deal of pleasure to the visit of the Illinois State Medical Society in May, for it is an honor to entertain such a gathering of men as comprise the members and leaders in this society. Then the beautiful old city of Quincy will be at her best. Situated on the limestone bluffs which line the Mississippi at this point, she commands the finest natural location for a city in the entire middle west. Our city is the largest between St. Paul and St. Louis and Kansas City and Chicago, and her fame as a manufacturing city is second to none in cities of her class, while her beauty is manifested in her wide, spacious and elm-shaded streets. No other city of her class has so many home-owners as we. We have many things of interest to show our visitors, chief of which is the \$300,000 superb park system, the gem of the parks being "Indian Mound Park," with its original Indian mounds stretching along the bluffs, from which a most magnificent view is had of the river and the cities

up and down the "Father of Waters." The beautiful Soldiers' and Sailors' Home, with thirty-odd buildings and 2,000 members located here, is one of the model homes of the country. Quincy's waterworks system and the "Quincy way" of purifying and filtering its water is famous the world over. These are but a few of the advantages we possess, but we feel that all who have ever visited Quincy will want to come again, and those who have yet to make their first visit will not regret making definite plans to be here at the time of the state convention.

Particularly in the matter of hotels and lodging-houses are special pains being taken to accommodate the largest attendance in the history of the society. Quincy has seven hotels, the leading one being the Hotel Newcomb, which is second to none in the state outside of Chicago. These will be supplemented by the entertainment in many private homes of the city. The local profession has been canvassed and have arranged to accommodate over a hundred. We wish to make emphatic the fact that places have been obtained for the eight hundred visitors which we confidently expect to be with us in May.

On the evening of May 19 a boat ride and river excursion is being planned by the local committee of arrangements. The entertainment of the ladies has also been arranged for.

The Hotel Newcomb will be headquarters, and the place of meeting the Vermont Street Methodist Church, located but one block from the postoffice. The scientific program for the meeting is the best that has been offered for many years; it will appear in *THE JOURNAL* for next month.

Any inquiries in regard to accommodations or hotels may be addressed to Dr. L. H. A. Nickerson, chairman of the committee which has that matter in charge. A list of the hotels, with rates, etc., will be published later. Any other inquiries relative to the state convention may be addressed to Dr. C. A. Wells, the secretary of the local committee.

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### THE PASSING OF HOMEOPATHY.

In our correspondence columns will be found a communication on homeopathy which should be read by every member of the State Society and every graduate of a medical school practicing in Illinois. It should, moreover, be read by every honest practitioner of osteopathy. This communication, of course, came to us unsolicited. It was written by a man who for many years was a teacher in homeopathic schools and was a firm believer in the extravagant doctrines first promulgated by Samuel Hahnemann. Later in life he took a degree at a regular medical college and got himself straight on the books. This latter degree was hardly necessary, as he had for years used all sensible therapeutic procedures in his practice of medicine and surgery. His action, excepting the taking of the second degree, has been imitated by hundreds of graduates of sectarian schools who have with him recognized the vast

importance of modern discoveries influencing medical science. Happily the great body of the profession has recognized the plight of these practitioners and have admitted them as members of local medical societies without hesitation. The fact is that some of the better class of sectarian schools have been giving better instruction than some of the poorer regular schools whose graduates found no trouble passing certain venal boards of health and becoming members of local societies. We believe it is true that a number of men who have taken up with osteopathy in the belief that it really rested upon a scientific basis have found their error and are anxious to advance to a full knowledge of the science of medicine. We have been told that the present desperate efforts of osteopaths to secure recognition by the passage of a law giving them an examining board is largely due to their knowledge that osteopathy has only a minimum of truth as its basis. It is a question whether it would not be wise to admit the better qualified osteopaths into medical colleges and graduate them after a shorter course than is required of medical students who are entering on the course of study and thus hasten the extinction of this waning sect.

This ex-homeopath has made a strong case in favor of the abandonment of homeopathy; an even stronger plea could be made for the abolition of the sect of eclectics and physio medicals. From the schools of these two combined only 120 were graduates in 1907, and it certainly will only be a few years until their names and schools will be reminiscences as vague in medical history as arminianism and predestinarianism are in theological history.

Far be it from us to gloat over the decadence of sects in medicine. In the dark ages of science they seemed unavoidable. Even in the light of the past quarter of a century Christian Science and osteopathy have gained supporters from people presumed to have a sufficiency of gray matter. Rather do we hope for the day when the sunlight of truth shall so illumine the pathway that no deviation will be possible to those outside the hospitals for the insane and feeble-minded.

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#### STATE INSTITUTION FOR CRIPPLED CHILDREN.

In July 1907, we called attention to a bill carrying an appropriation of \$60,000 passed by the Illinois General Assembly for the establishment of a state institution for the treatment of deformed and crippled children. A similar bill has been introduced again in the legislature this year by Representative Chipperfield and demands consideration. Nothing has occurred during the past two years to make us think that Governor Deneen was in error in vetoing the former bill. Recent reports from the New York State Institution tell the same story, that the number of children seeking treatment in the hospital of that great state has remained extremely limited and of such a character that treatment can be given them at the various hospitals now to be found in all parts of every commonwealth. The rapid improvement in the treat-



ment of tubercular diseases leads to the well-founded belief that these diseases are rapidly decreasing in number and before many years will be altogether eliminated. We understand the gentleman pushing this matter is a resident of Galesburg and that he has a sentimental interest which, while creditable to his heart, is scarcely sufficient to warrant the state in the expenditure of an abnormal amount for the care of a limited number of the unfortunates of the state. We trust, therefore, that this bill will not be pushed through to a passage, and that if it does the governor will be as prompt to veto it as he did the previous bill.

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### SUICIDE AMONG ADVERTISING SPECIALISTS.

H. C. Sechrist, an advertising "specialist," graduate of Miami Medical College, Cincinnati, 1881, formerly located in Chicago and Milwaukee, committed suicide, February 4, in Moline, Ill. This is not the first instance we have known of the self-destruction of the advertising specialist, and when the business methods of this gentry are considered it does not seem strange that a large percentage of them get tired of life and seek consolation in self-destruction. There should be in this a lesson for the young practitioner having in mind deviation from the traditional straight path of the medical profession.

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### THE FIFTY-NINTH ANNUAL MEETING.

The fifty-ninth annual meeting of the State Medical Society will be held at Quincy, May 18, 19 and 20, and promises to be an occasion comparing well with other meetings of our organization. Quincy is beautifully located on the east bank of the Mississippi River and is one of the larger cities of the state inhabited by substantial and enterprising citizens, and has a wide awake, progressive medical society, the members of which are taking an unusual interest in advancing the interests of the profession. Arrangements have been made by the committees to secure comfortable accommodations for all those who may attend, and it is hoped that a record-breaking number will take advantage of the opportunity to assemble for professional education and entertainment. The development of the local society in all parts of the state has brought forward a large number of men interested in society work, and these state meetings should be, as they usually have been, each an improvement upon the one preceding. Certainly no one interested in the practice of medicine in Illinois can afford to miss this occasion.

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### OSTEOPATHIC LEGISLATION.

Again the osteopathic practitioners are busy with the members of the Illinois General Assembly and again it becomes necessary for every member of the state society to get busy and oppose the sectarian and

dangerous bill which they propose and which they have already gotten through the Senate. In the House the bill has been read once and was referred to the Committee on Judiciary, which has given two hearings on the subject and appointed a special committee of five to consider the bill. At the first hearing before the committee the osteopaths are reported to have had matters all their own way. At the second meeting the medical profession was represented by Chairman Taylor of the Legislative Committee, Drs. Preble of Chicago and Mammen of Bloomington, and active and well directed effort was made to kill the bill. It is now up to the profession, and we doubt not that they will at once see their representatives and let them know their views.

As far as we can learn there are not more than 500 osteopathic practitioners in the state and 40 per cent. of these are women. That the members of the legislature would pass a bill of this character on the demand of 300 voters, against the wishes of not less than 9,000 voters, we do not believe is possible. We say nothing at this time of the vicious character of the legislation asked. Numbers usually count more than anything else with the average politician.

#### HOTELS AND RATES FOR ANNUAL MEETING.

Newcomb Hotel, headquarters, American plan, \$2.50 to \$3.50.

St. James, American, \$2.00.

Hotel Moecker, European, 75 cents to \$1.00.

Wood's Hotel, European, 75 cents to \$1.00.

Franklin House, European, 75 cents to \$1.00.

Ocidental, European, 75 cents to \$1.00.

All the above hotels are on the car lines and adjacent to the place of meeting. In addition to the above, about 100 guests will be accommodated in the homes of the local profession of Quincy. All who come will be accommodated either in the hotels or in the private homes of the city. Kindly send in your reservations and state whether you would like to be accommodated at one of the hotels or in a private home. Dr. L. H. A. Nickerson is chairman of the Committee on Hotels.

The local Committee of Arrangements has provided for a bureau of information both at Hotel Newcomb and also at the church, where all sessions of the society will be held. There will also be free messenger service and telephone service for members of the state society.

The Elks' club rooms, corner of Sixth and Maine Streets, the home of the Adams County Medical Society, will be thrown open to the members of the society.

Plans are maturing for a river excursion and boat ride on the evening of May 19, and this promises to be one of the most enjoyable features of the convention. Appropriate entertainment for the visiting ladies will be arranged for.

The excellence of the program to be presented at the Illinois State Medical Society in Quincy, May 18-20, should attract the largest attendance in the history of the society. The plans of the local committee at Quincy will provide pleasing and most enjoyable entertainments. Begin to make your plans now to be present.

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### Correspondence.

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#### DR. J. WHITEFIELD SMITH, COUNCILOR, WRITES A STRONG LETTER INDORSING THE TEXAS RESOLUTIONS.

BLOOMINGTON, ILL., March 1, 1909.

*To the Editor:*—Replying to yours of the 19th ultimo, in which you ask for an opinion respecting the conclusions reached by the Board of Councilors of the State Medical Association of Texas in regard to the resolution adopted by that body relative to the ethical nature of the practice among some physicians and surgeons of dividing fees, giving and receiving commissions, paying rebates and other material remunerations or compensations, without the knowledge of the patient, for referred business, particularly between the specialist and the general practitioner, would say that I heartily approve and endorse the action of the Council of the State Medical Association of Texas in this matter for the following reasons:

First.—That I believe in reciprocity among the members of the medical profession, which in no way does violence to one's conscience or the code of medical ethics, neither compromises the dignity nor the integrity of any of the individuals concerned; yet I do believe that all mercenary methods employed for securing patients for consultation, treatment or operative procedure, at the hands of the disposing practitioner, is unethical and needs only to be mentioned to be condemned.

Second.—That the spirit of commercialism which has crept into the profession and which has been tolerated so long by its members is, to a certain extent, responsible for the charlatanism, empiricism and the unreasonable and unwarrantable pretensions to skill, among some of its members; and, furthermore, toward these unjust practices, has encouraged rather than hindered an uneducated and unqualified coterie of laymen to assume the duties and responsibilities of a trained and learned profession, and to practice the healing art upon an indiscriminating public, for none other than mercenary and selfish motives.

Third.—Because the practice of medicine and surgery is a profession, and under no circumstances must it be considered a trade. All of the boastful features of advertising in the press, the giving of premiums for business, unjust and unreasonable charges in order that rebates may be given, or profits divided, certainly places the profession in the position of the latter, which not only degrades the profession but debases the member who indulges in the practice.

The profession of medicine is not on the same plane with a trade. What would apply to a trade as perfectly honorable and legitimate may not apply at all to a profession, and whoever uses the method of commercialism in securing a practice is unworthy of the confidence reposed in him by his patients and is undeserving of the respect of his colleagues.

Yours very truly,

J. WHITFIELD SMITH.

### HOMEOPATHY—BEGINNING OF THE END OF.

*To the Editor of THE JOURNAL:*—Please permit me to state a few facts and to ask a few pertinent questions.

A recent publication issued by authority of the American Institute of Homeopathy gives the total number of homeopathic graduates for the year 1908 as 243. There are, I think, 18 so-called homeopathic colleges, giving an average of 13 graduates to the college. Some of these colleges, I observe, no longer dwell upon their sectarian tenets and teachings, but rather enlarge upon those branches which are generally accepted as forming the basis of every rational medical education. One institution has dropped the word "homeopathic" from its title and assumed a new name in no way suggesting sectarian teaching.

Homeopaths are entering the medical profession by the hundreds. A few years ago a strong homeopathic college was forced to close its doors because it was made public that many, possibly a majority, of its professors were sending their sons to regular institutions. There are a few scattered journals of trifling circulation and declining influence that profess to be homeopathic, but there is not one that can lay claim to anything more than mere local influence. Most of these publications are supported by some college or commercial interest.

Is there a single so-called homeopathic college in America whose income from students is sufficient to pay its running expenses?

How many professed homeopaths are to-day sending their sons and others to regular colleges?

How many practitioners are to-day openly proclaiming their sectarianism?

The fact is, homeopathy as a fashionable fad is worn out. It is a back number. Candid men of all schools see it and generally are free to admit it, privately if not openly. The reason for the general smash-up of sectarian medicine is easy to see. The immense strides made by the regular profession in all branches of medical science have been noted



and accepted by the hard-headed, practical people of the country. In this great evolution homeopathy has been swallowed up and forgotten.

I believe there should be systematic effort made to gather in the scattered homeopaths into the ranks of the medical profession. The great stumbling block will be a so-called "homeopathic" diploma, to which some short-sighted regulars foolishly object. There ought not to be any squeamishness on this head. To every such practitioner I would say, "Come in with us; all of us have a great deal yet to learn about medicine; if you have anything good we want it; you have always been welcome to all that we have in the way of knowledge; stop running a poor side show and join us in the main tent."

I do not sign this letter because I do not wish to arouse the slightest personal feeling. In the little city where I live there are Drs. Blank, father and son. The son is a regular. The father calls himself a homeopath. Meaning no possible reflection upon the father's sincerity, I am able to see no difference whatever between his methods and those of his son. I mean no self-compliment when I say that their medical work is fully as successful as my own. The son is kept out of the society because of his association with his father. For my part, I would take both of them into the fold, when the last would be heard of the old gentleman's "homeopathy." He would soon forget all about it.

There are, in my judgment, hundreds of capable, experienced men who would be glad if some one would say to them, "Bring on your 'pathic' sheepskin and say no more about it. The more you associate with progressive men the sooner you will forget all about past follies."

Some bright morning homeopathy will wake up and find itself dead. In the meantime I believe that its progressive elements should be warmly welcomed into the ranks of regular medicine. Not only welcomed, but urged to drop a name that means nothing, to give up no honest principle, to abandon no sincere belief, merely forsake something that has outlived its usefulness.

PHYSICIAN.

## COUNTY AND DISTRICT SOCIETIES

### ADAMS COUNTY.

The regular March meeting of the Adams County Branch was held March 5, at the usual time and place, President Henry Hart in the chair. Others present were: Drs. Bierne, Pitman, Miller, Gabriel, Bearman, Pfeiffer, E. Zimmermann, Groves, Rice, Kuapheide, Baker, Ashton, Meyer, Haxel, Brenner, Kidd, Knox, Koch, Center, Becker, Christie, Jr., Lierle, Johnston, W. W. Williams, Shawgo, J. B. and Kirk, Robbins, Collins, Knapp, Erieson, Gilliland, Nickerson and Wells. Visitor, Dr. McKim, of La Belle, Mo. A communication was read from Dr. J. R. Pennington, of Chicago, in regard to his lecture and clinic on April 12, and the society extended also an invitation to Dr. Paul Gronnerud to visit Quincy at the same time and hold a surgical clinic. The application of Dr. L. P. Peters, of Clayton, was received and referred to the censors. The idea of holding a joint meeting with the ministers of the city to discuss the Emmanuel and kindred movements was not favorably considered. Adjournment to the Hotel Newcomb was then had for luncheon. After which Hon. W. H. Govert, the attorney of the medical defense for this district, was introduced and addressed the society on "The Medical Practitioner's Duty to the Courts, and on the Witness Stand." For over an hour and a half the speaker held the close attention of his hearers, and his replies to questions and inquiries at the close of his discourse were most illuminative and instructive. He clearly showed by citation of cases passed upon by the Supreme Court of this state that the physician must testify even as an expert in cases where he has been summoned, though no provision has been made, or contemplated, for remunerating him as an expert witness. That all physicians were regarded as experts and their knowledge could be demanded and compensated by the tender and payment of the ordinary witness' fees. That coroners had no right or authority, unless specifically endowed with such by the supervisors of their county, to order inquests upon dead bodies with promises to pay the physician for the work. In regard to the physician on the witness stand, advice was given him of the danger and fallacy of relying upon authorities in medicine. As a witness he should tell what he himself knows, briefly, and avoid the danger of trying to explain his answers. Never be afraid to say, "I don't know." In regard to malpractice suits Mr. Govert was of the opinion that physicians themselves are responsible for the most of them, which are started by unwittingly giving opinions on cases in reply to questions from a fellow practitioner's patient. He held that physicians should be more careful in this regard, and that if they did so malpractice suits would almost cease to be started. The address was very instructive and enjoyable, and at its conclusion the speaker was given a vote of thanks, and in addition thereto was elected to honorary membership in the Adams county society.

CLARENCE A. WELLS, Secretary.

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### ALEXANDER COUNTY.

The regular meeting of the Alexander County Medical Society was held February 26, at Cairo, with the President, Dr. Cary, in the chair. There were present Drs. Bondurant, Clarke, Davis, Dunn, Dodds, Dickerson, Fields, Hibbets, McNemer, Rendleman and Walsh. Dr. Henry Davis reported a case of placenta prævia centralis, with recovery of mother and child. The discussion following was very interesting and was participated in by Drs. Bondurant, Clarke, McNemer, Cary and Walsh. Dr. Clarke reported a case of complete inversion of uterus protruding beyond vulva, immediately following parturition. Dr. Wilson

of the U. S. Marine-Hospital Service, an honorary member of the society, reported an unique case of precipitated labor. The Board of Censors reported favorably upon the application of Dr. E. E. Gordon, following which he was elected to membership in the society. Dr. Bondurant read a report of a case of mastoiditis, as follows:

Mrs. G. B., aged 27, married. Saw her first Jan. 13. Had been ill three or four days with acute ear trouble, which from history was quite severe. Temperature at 6 p. m., 104; pulse, 120; respiration, 25; severe pain in left side upon coughing or deep inspiration and they suspected pneumonia, so they said, and gave that as reason for calling me. Left ear was discharging pus. Whole left half of head sore and severe pain in ear and mastoid region, swollen and red back of ear. Deep pressure over antrum and tip elicited characteristic mastoiditis. I failed to find lung or pleural infection, but that side of neck and chest seemed to be in sympathy with head trouble. Gave acetyl salicylic acid and codein internally. Frequent syringing of ear with warm water (every half hour, if needed) and instilled boric acid and cocain after such irrigation.

I asked for an operation to be done next morning. She had been delirious at intervals, had rigors and irregular temperature. I believe I state the truth when I say unfortunately she rested much better that night, and, being afraid of surgical work, refused to even go to the hospital next day. Acute symptoms—pain, temperature and swelling fluctuated, with some general improvement for three days, and she came to my office once. I still insisted upon operating, though swelling over mastoid had subsided largely. I knew mastoid cells were infected from pressure, producing pain, especially at two points (over antrum and tip), profuse discharge and expression of distress. Sunday evening, fifth day of my attention, she suddenly became unconscious, and remained so about 45 minutes, gradually regaining consciousness. Pupils slightly dilated, with left probably the larger, and responded to light very imperfectly. Pulse weak and rapid, respirations about normal frequency, but shallow and irregular. This alarmed the family sufficiently to accept surgical procedure, which, assisted by Drs. Rendleman and Walsh, I did next morning, Jan. 18.

We did what is known as "the modern complete mastoid operation." Made incision from below tip of mastoid to above upper attachment of pinna, keeping about 1/4-inch back of pinna. Second incision backward from opposite external auditory canal about one inch length. Chisel and gouge were used to enter the antrum, which proved to be unusually large, with chambers almost completely separated. Pus everywhere from tip cells to those at base of posterior root of zygoma.

The entire bone work was done, after entering cavity, with rongner and curette, and not a spongy vestige left, so far as we could determine, including tip and those at root of zygoma. Suturing done with silkworm and chromicized gut. First dressing was with oiled silk adapted to the walls of the cavity packed with iodoform gauze. The upper half of the pinna lost its sensibility, which is gradually returning. This was due to division of (I think) the auricularis magnus, a branch from the cervical plexus. The wall of the canal which contained the facial nerve was plainly seen, but not disturbed. The flexure of lateral sinus was a little more conspicuous than the average and we were forced to pass slightly to rear of same before all spongy bone was removed. The periosteum (I might say, technically speaking, endosteum) covering the thin inner plate of skull at middle upper part of cavity was destroyed and the delicate sentinel between her brain and this army of death dealing germs was weakening and has had a hard battle in repairing the damage. The progress has been slow, but very gratifying. Infection principally diplococci, some staphylococci.

March 2. The bone surface has completely granulated and healing will be more rapid. Temperature evening before operation was 104. Pulse 120. Morning of operation temperature 103; pulse 110. At noon and evening of same day temperature 101 and pulse 100, after which temperature never was above and seldom to 100.

## COOK COUNTY.

## CHICAGO MEDICAL SOCIETY.

*Regular Meeting, Jan. 6, 1909.*

A regular meeting was held Jan. 6, 1909, with the president, Dr. Alfred C. Cotton, in the chair. Ernest Lackner read a paper entitled "The Milk Supply of Copenhagen—The Only Proper Supply in the World." The paper was discussed by Charles S. Bacon, G. Koehler, I. A. Abt, Rosalie Ladova, W. H. Cheney, J. H. Hess, Caroline Hedger, Alfred C. Cotton, and in closing by the essayist. Caroline Hedger read a paper entitled, "Physical Examinations of Below-Grade Children,"\* which was illustrated with numerous stereopticon views. Discussed by Rosalie Ladova, J. H. Hess, I. A. Abt, Alfred C. Cotton, and the discussion closed by the essayist.

## DISCUSSION ON THE PAPER OF DR. LACKNER.

Dr. C. S. Bacon:—This description of the Copenhagen Milk Supply Company is important chiefly to us practically in comparison with our own milk supply in this country and in this city. It seems that this company supplies two kinds of milk—infant's milk, and the general supply of milk. Infant's milk is more carefully prepared than the general supply. For instance, the cows are tuberculin tested. This infant milk can well be compared with the certified milk supply in this country. All present here are more or less familiar with the certification of milk in America. It was started about sixteen or seventeen years ago by Dr. Coit, of Newark, New Jersey, and since then medical milk commissions, founded on the model medical milk commission of the Newark County Medical Society, have been instituted in twenty-five or more cities in this country. The milk, to which the term "certified" is given, is produced under conditions essentially the same as those of infant milk in Copenhagen, there being only a few changes in details. For instance, filtration is generally effected through sterilized gauze and cotton. The milking is done in pails, not of the kind that have been recently used in Copenhagen, but in pails that have been carefully arranged. There have been many tests made as to the best form of pails. The essential idea here is to get the milk cooled as quickly as possible.

Recently I visited a plant in Pewaukee, where I saw the milking begun, and followed it from the first milk which was poured into the cans. There were a number of milkers on both sides of the stables. The milk can is filled in a few minutes. It is taken to the house, filtered and cooled, and in eighteen minutes from the time the milking began the milk came out of the cooler at 40 degrees and was bottled. The milk later on may be bottled within ten minutes. When milk is produced in this way it is not essential to have a special milk pail like that described to-night.

The general supply of milk is to be compared with our general supply. I do not know just what proportion of the milk of Copenhagen is supplied by this milk supply company, but other companies furnish milk, perhaps not as good as that of the milk supply company. It is possible in smaller cities to get a milk that is fairly pure, fairly safe, but I doubt whether that is possible at the present time in our large cities, particularly cities the size of Chicago and New York. I think we have made and are making a great improvement in carrying out the plan that has been recently adopted in the city. There has been a remarkable improvement in the milk supply in Chicago in the last twenty years or more, even where there was no inspection, and absolutely no control; but gradually, more and more, we are becoming able to control the situation. There has been greater progress in the last two years than all the rest of the time put together, and I believe that the conditions existing here have been carefully considered by the Health Department in the method that has been adopted. There is danger in tubercle bacilli; there is danger in other disease germs. Whether tubercle bacilli

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\*For text of paper see page 433.



pass through healthy udders or not into the milk, it is true that there is a good deal of danger from other sources. Our new regulations provide that this danger at least can be met by pasteurization.

Dr. G. Koehler:—I have listened to Dr. Lackner's paper with a great deal of interest, and I have learned a great many things from it. I am personally very much obliged to him for presenting such a complete report on the Copenhagen milk supply, because in our work in connection with the milk supervision we hear a great deal, from time to time, about the milk supplies of Copenhagen and of Buenos Ayres. There is one point that particularly interests me, that is, whether the milk supply Dr. Lackner has described as the milk supply of Copenhagen is really the milk supply that is furnished by this one company (which supplies the largest part of the milk there) or whether the regulations he has spoken of are municipal regulations, applied to all handling or producing milk. This milk supply is ideal. It is interesting to know that it has taken a long time to get it, and that there has been a gradual process of evolution, going through the stage of pasteurization, as I am informed that some five or ten years ago the milk supply of Copenhagen was pasteurized and was heated much higher than we heat so-called pasteurized milk in this country, so that the cream did not rise. In other words, the cream line was destroyed. It has seemed to me that it was not necessary to heat milk as high as that in order to destroy tubercle bacilli, and, I am sure, that we would have great difficulty in this country if we required that milk be heated to 176°, because then the milk delivered would not show the usual amount of cream. It is interesting to note the way these improvements have been brought about in the milk supply through the efforts of one company. That is also true of the milk supply of Buenos Ayres, a certain company requiring these things of the farmer producing milk, then selling as cheaply as possible to the consumer in the city, and naturally others had to follow in line. An arrangement of that kind would do a great deal toward improving our milk supply here. I had a talk with Mr. Roach, of the Neill, Roach Dairy Co., in Louisville, a short time ago. They are purveyors of certified milk. Their certified milk in Louisville is handled entirely by this one company. They make contracts with farmers in the country to deliver a certain grade of milk, which we may call aseptic milk, such as the milk spoken of by Dr. Lackner, and we find that this milk is pretty hard to get. I firmly believe that it is possible to produce this aseptic milk in a much cheaper way than we are producing it here in the neighborhood of Chicago. We have a number of millionaires who are engaged in this business, and they have milk houses and bottling establishments that cost thousands of dollars. When we take farmers to these establishments they get scared; they think that this is something absolutely impossible for them to do. The Neill, Roach Dairy Company has taken one farm after another, and at the present time they have five or six, and have demonstrated to the farmers that so-called aseptic milk can be produced in cheaper establishments. We do not need to have barns that are plastered and calcimined, but we can produce this milk in much cheaper barns. We do not need to have milk houses that are lined with tiling, or bottling establishments with floors of tiling. We know that aseptic obstetrics is and can be practiced in the hovels on the west side, just as well as in the best equipped hospitals. The production of this aseptic milk is growing through the efforts made by this company. They are paying the farmer at the present time eight cents a quart and are selling it for twelve. If the city authorities would go out and demand all of these things, the farmers would object and probably would go out of the milk business. In the first place, we have too many producers to deal with to get a milk supply which will correspond with the milk supply of Copenhagen. It must be a gradual process of evolution, to be successful. In Buenos Ayres they have reached the stage of universal pasteurization. We have not reached that stage, but we are getting into it now. A few words about pasteurization. I do not believe in pasteurization, but in certified milk. I do not believe in pasteurization of milk that is produced in the manner described by Dr. Lackner; nevertheless, I would ask one question: Why do they pasteurize milk produced in the manner described, that is delivered to infants? I do not quite understand that.

When it comes to the milk supply of large cities, it is a matter of choosing between two evils. We have the conditions to contend with as we have had them in this city. In order to produce milk in an aseptic manner, it is necessary to see the twelve thousand farmers supplying the city with milk, and a large number of them are not in the milk business; they are in the manure business. All the farmers in the southern part of the county keep a few cows, not principally to make milk, but manure for their farms. They will not be bothered about doing these things, and I believe they would sooner go out of business than produce milk. Of course, they will be driven out of business gradually. This should be done at once, as a large number may be led to make the necessary improvements and in the long run come out as producers of first class milk. Then pasteurization of the general milk supply may become unnecessary. In Chicago we think this will be five years from now.

Dr. Isaac A. Abt:—I want to emphasize one or two points brought out by Dr. Koehler. In the first place, certified milk or "fancy" milk is produced at great expense, and it seems almost useless to hope at this time that certified milk will become universally used. Owing to its high price it is intended more for the privileged class or people of means. The large majority of people, and the large majority of babies raised in a large city like this, must be fed on the ordinary market milk.

I must take issue with the essayist relative to pasteurized milk. While I am not an advocate of pasteurized milk, nevertheless I think there can be no doubt but that ordinary market milk should be pasteurized. There is no argument necessary in support of this. Everyone will concede the fact that ordinary raw milk, as it is brought into the market, contains pathogenic micro-organisms, and whether it contains tubercle bacilli or not, we know such milk is responsible for epidemics of typhoid, scarlet fever, diphtheria, etc. Therefore, our advice should be to pasteurize such milk on a large scale. What is the clinical evidence in support of pasteurizing such milk as I have mentioned? It has been abundantly demonstrated by Budin, who has a maternity in Paris, that during the many years pasteurized milk has been used, he has reduced materially the mortality in maternities and infant hospitals throughout Paris. Again, all through Germany there are milk stations where pasteurized milk is distributed. There are separate stations where pasteurized milk is distributed, and the babies are thriving much better on it than on the market milk.

Lastly, I would refer to some interesting experiments that have been carried on by Dr. Emmet Holt, and Dr. Park, of New York, who made a census of the babies that have been fed on various milks supplied to and used in the city of New York as infant food several summers ago. They examined the morbidity and mortality records of babies fed on condensed milk, certified milk, etc., and the lowest mortality and lowest degree of morbidity occurred among the babies who were being fed pasteurized milk. If a baby can be given fresh certified milk it is desirable to do so. On the other hand, it is much more desirable to give pasteurized than ordinary market milk which teems with bacteria.

Dr. Rosalie Ladova:—I have been very much interested in Dr. Lackner's paper, but would like to know a little more about how the bottles are prepared. I do not think enough attention has been paid to the corking of the milk bottles. It is all right to have aseptic milk, if possible, but it does not always reach the consumer in an aseptic state in this city, as I know from observation and experience. The milk bottles of the Borden and Bowman companies are sealed or covered with circular paste board, and around these bits of circular paste boards are crevices sufficiently large for dirt to get in. I find I always have to wash the side and top of the milk bottle because it is always dirty. I spoke to the milkman about it, who said they keep these bottles on ice, and quite often the ice is not free from dirt. This year, when they did not have ice, the bottles were just as dirty. I think it would be well if these bottles could be better protected.

Dr. H. W. Cheney:—I am very glad to have heard this paper by Dr. Lackner. Dr. Koehler has called our attention to the point that improvement in the

Copenhagen milk supply has been a process of evolution; it has been a matter of years, and I believe that we in Chicago are going through this same process of evolution. We are getting better things right along, and probably there has been more improvement made in the last two years than in all the previous history of the milk supply of Chicago, and I think the time will come when we will have a milk supply here that will equal that of Copenhagen. Already steps are being taken to form a medical milk commission which will certify to the certified milk to be sold here, so that we shall have a certified milk such as physicians can depend upon.

Dr. J. H. Hess:—One thing that is open to criticism is the method of reporting contagious diseases. It strikes me as a rather unscientific way of reporting these cases by asking boys who deliver milk to assist the city in finding out contagious diseases in the families to whom they deliver milk, and in neighboring families they hear about.

With reference to supplying milk to babies, I think some remarks from our president (Dr. Cotton) would be very pertinent, as he has made efforts to supply milk of good quality to babies in the Jackson Park Sanitarium, being stimulated in his efforts by the endeavors of Dr. Evans. In order to get a good fresh supply of milk from cows, we were encouraged by the South Park Board, who furnished a stable, and some members of the society assisted in procuring cows. But unfortunately it was late in the season, and the only place we could get a stable was in Washington Park. We also had difficulty in finding an experienced milker, so that after a short period we had to give up the idea for the summer.

Dr. Evans thinks it is possible to keep cows in the city of Chicago. He said that there are some eighty thousand horses in the city, while there are less than ten per cent. of that number of milch cows. He believes that by doubling the milch cows in the city it will be possible to feed babies on fresh milk. As I have stated, we tried the experiment, but met with some handicap. Perhaps next year we may be able to do better.

Dr. Caroline Hedger:—With regard to the remarks made by Dr. Hess, we had the same cow; she was milked by a peasant woman for \$2.10 a week. This cow supplied seventeen families with milk for convalescent babies. We taught a simple method of pasteurization, heating the water in the pan to boiling, with the can of milk inside. Another peasant sterilized the cans in the mornings when they were brought in. The neighbors took to pasteurization easily. Of the seventeen families that were supplied with milk from this cow, there were no babies lost.

Dr. Alfred C. Cotton:—I want to say a word or two about that cow. I knew her. She gave an abundance of good milk. I got three quarts of milk from this cow one time, a portion of which I drank myself, and my family drank the rest of it, although it was not considered fit to give babies, on account of the unhygienic care given to it. A bellboy at the Del Prado was employed at 75 cents a day to milk this cow. He could not do it, so he gave a sheep-herder, who had charge of a flock of sheep, one-half the money if he could milk the cow. Unless great care is used in handling the milk before it reaches the consumer, we can not expect good milk for babies, milk that is germ free. While this particular cow gave good milk, we had to let her go merely because we did not have the facilities for her care. She cost us nothing. The feed cost nothing. The only expense was the elevator boys, \$1.50 a week. Although we only had the use of and milk from this cow for fifteen days, it undoubtedly saved several lives. Those who remember the death-rate will recall that we had but four deaths after this red cow, although we had nine or more deaths before it. Some of us know that the milk supply before that was not only not above suspicion, but dangerously filled with pathogenic organisms. This red cow was a missionary, in that the milk people who supplied milk knew they were in competition with the real thing in the form of this cow, and their milk improved after this and the death-rate fell off.

With regard to pasteurization, I want to say in all earnestness that if pasteurization obtains in the city of Chicago we will have taken a long step backward in the milk problem, and it will take us a couple of decades to get over it. Perhaps there is no man in Chicago who is better informed on the milk question than Dr. Abt, yet he for some reason favors the pasteurization of milk. Of two evils, we should choose the lesser, and if we want to select certified milk, all right. As has been stated by Dr. Lackner, great good has been done in this city during the last two years with regard to improving our milk supply. During this time we have noticed a marked improvement, and if we put our shoulders together and back up the City Health Department and work for legislation which will insure the veterinary surveillance of cows, throughout the city and state, and proper compensation for destroyed animals paid to the farmers by the state, we will have eventually a good milk supply, and when we open the doors to frauds, to carelessness and neglect, that will come with pasteurized milk, it will be a sad day for us.

Dr. Lackner (closing the discussion):—The Copenhagen Milk Company supplies 40,000 people with milk, and has sold from eight to ten million litres of milk yearly. There is a little pasteurization done because physicians ask for it. Simply heating milk at a temperature of from 178° to 185° does not pasteurize it. The milk is not thoroughly heated. You have to have a special apparatus in order to pasteurize milk, and it must be stirred and brought in contact with the heating process. Milk that is pure should not be pasteurized. I had occasion to watch the whole process of preparing milk before shipment in one large establishment. We asked a laboratory man as to the percentage of bacteria found at the receiving station in milk, and he said from one hundred thousand to three hundred thousand per c.c. We looked at the pasteurizing institution, and, among other things, asked how long it took to pasteurize milk, and we were told one minute. We were shown how the vessels were sterilized in a large milking establishment. A large container was washed in a vat of water, after which it was taken out and put over a steam-pipe. They did not have enough steam to sterilize cans when milking. Even though the milk is pasteurized, it will not kill all the germs in it. To pasteurize milk one needs an expensive apparatus, and it is only the rich man who can afford to get the various machinery for carrying on this work. The smaller men, those who are not so rich, will eventually have to go out of business. They can not pasteurize the milk, and the larger firms, who are doing this business, will have to be watched closer than a cat watches a mouse. It all costs money, and even then we can not guarantee that milk will be pasteurized. If you are going to heat milk at a temperature of 178°, it will be necessary to keep this temperature up for fifteen or twenty minutes, in order to pasteurize milk. It seems to me, the whole process of pasteurization is wrong because it can not under any circumstances be enforced. I am sure, with the energy Health Commissioner Evans has developed, and with the work he is doing, if the public will stand back of him and support him, he can bring about a great improvement in our milk supply and force these people to furnish good milk. The big dealers will do it, but they say they are helpless unless the farmers take a step to improve the milk supply.

Dr. Caroline Hedger read a paper entitled "Physical Examinations of Below Grade Children," illustrated by numerous stereopticon slides.

#### DISCUSSION ON THE PAPER OF DR. HEDGER.

Dr. Rosalie Ladova:—I wish to congratulate Dr. Hedger on her excellent paper, as it not only shows the careful and good work of an intelligent physician, but a social worker as well. How much can be learned and known in this line, it is hard to say, but the work is very commendable, and there is nothing like trying.

Dr. Isaac A. Abt:—I have enjoyed Dr. Hedger's paper very much, and during its reading one or two points occurred to me. For some time I have been impressed with the idea as to whether we had a reliable standard for judging



physical and mental development in children. Of course, we measure the height and take the weight; but it is a question whether these are reliable standards, or whether they represent exact standard of development. For two or three years I have been studying the question of what children should be sent to kindergarten and what children should be kept at home, having in view their physical development, to say nothing of their mental development. I have found that children who seemed tall enough and weighed pretty well were unable to stand the strain of kindergarten work. What is eminently desirable would be a better standard of development. Rotch has done some work along this line. He has made x-ray pictures of the wrist bone and has studied the development of the bones of the forearm, of the wrist, and of the hand, but just how these investigations are going to turn out, no one is in a position at present to know.

With reference to the frequency of cardiac findings, we are continuously confronted with the various forms of murmurs and cardiac changes, not only in children of the poorer classes, but in children of the luxurious class, and no one has presented as yet a satisfactory analysis of the pathological conditions that underlie these cardiac changes. It is true some of them are anemic murmurs; some of them are rheumatic, inflammatory affairs, and not a few, I think, are of myocardial origin or due to dilatation from strain. This is a chapter in cardiopathies of children which has still to be written.

Dr. Alfred C. Cotton:—If any one will take pains to round up a lot of boys, eight or nine years old, and put them through a vigorous racing for a prize for five minutes, and then examine their hearts, it will be astonishing how many cardiac murmurs will arise. If he will pick out children that are anemic, feed them afterwards and watch them, he will be astonished to see how many murmurs will disappear on a good diet, with perhaps a little tonic.

Dr. Hedger (closing the discussion):—I am not sure of the exact nature of the heart findings in these cases, that is why I put them in a tentative way. I was not sure in every case that a transmitted murmur meant an inflammatory or rheumatic condition. I was glad to hear the suggestion of Dr. Abt regarding a myocardial condition. I have not considered that as thoroughly as I ought to have done. Anemia and intoxication were so apparent the possibility of myocardial degeneration from general malnutrition was overlooked.

#### *Regular Meeting, Jan. 13, 1909.*

A regular meeting was held January 13, 1909, with the president, Dr. A. C. Cotton, in the chair. "The Fresh Air Treatment of Surgical Tuberculosis," by Brainerd Hunt Whitbeck, of New York City. Discussed by J. Ridlon, E. W. Ryerson, Carl Wagner, and the essayist, in closing. "Fracture of the Carpal Scaphoid," by Allen B. Kanavel. Discussed by M. Reichmann, M. R. Barker, B. H. Whitbeck, C. A. Parker and the essayist. Adjourned.

#### DISCUSSION ON THE PAPER OF DR. WHITEBECK.

Dr. J. Ridlon:—Last March I had the pleasure of visiting the Sea Breeze Hospital. It was a cold day, so cold that some of the visitors went around with their ears covered, and overcoat collars turned up. The children were going about without any extra covering, the windows being open and the wind blowing in strong enough to ruffle one's hair. The children gave no evidence of being cold. They were undressed and put to bed and seemed to enjoy the cold. They seemed to be in remarkably good health. I was so enthusiastic that I wanted to start an outdoor institution here, and another on the sea coast for private patients. The most I have been able to do has been to put the children having fever at the Home for Destitute and Crippled Children out on the roof. I tried to get them out last March, but failed to persuade the superintendent to believe as I did, and it was not until summer that the plan was carried out. When the cold weather came they were put indoors again, but they sleep in rooms with south windows and the windows are kept open half way. The steam is turned on and the rooms are fairly warm.

There can be no question about the advantage of the open air treatment of surgical tuberculosis and of the location of a hospital at the sea coast. While listening to the reading of the paper I wondered whether it is not necessary for these cases after they are healed by the outdoor treatment to continue their existence out of doors, in order to prevent a recurrence. I wish the Doctor had shown more fully the final results in his cases a year or two after they left the hospital.

Fresh air is beneficial in the treatment of these cases, but it is by no means the only essential factor in the treatment, any more than is medicine or surgery, or anything else. We see cases that receive no treatment whatever that do just as well as do the cases that receive the very best treatment and of the latter, some terminate fatally, in spite of all treatment and efforts to produce a cure. I have in mind now the case of a little boy in New York whom I saw many years ago. He had sacro-iliac joint tuberculosis; his older sister had hip-joint tuberculosis; his father died of pulmonary tuberculosis. His mother was a washer-woman and they lived in two rooms, one light, the other dark. The little girl had received treatment, but had not done very well. The little boy got no treatment at all. He was confined to these two rooms, crawling around on the floor, and resting in bed alternately. During the summer time he would spend considerable time at the open window. He was not kept particularly clean, he wore one shirt a week, and this would become saturated with the pus from the sinuses. Every Saturday his mother gave him a bath and a clean shirt. I watched that boy for three years, wondering how soon he would die. He got well. That is an illustration of what may occur in tuberculosis.

More than twenty years ago I showed at the New York Academy of Medicine a series of joint cases and read a paper on syphilitic joint disease. Every orthopedic surgeon said that there was no such thing as a syphilitic joint disease. One man said that he always treated tuberculous joint disease with mercury and iodid of potash, and that this treatment cured tuberculosis. Therefore, I was very much interested in that part of the Doctor's paper referring to this subject. We have demonstrated that patients suffering from so-called syphilitic joint disease, inherited or personal syphilis, give a typical tuberculo-opsonic index. This means that either the opsonic index is not reliable or that the so-called syphilitic joint disease is really tuberculosis grafted on to syphilis.

The greatest thing about the Sea Breeze Hospital is the enthusiasm of the doctors and the surgeons and of the nurses. If we could always have this same enthusiasm in the treatment of all of our cases the results would be far better than they usually are.

Dr. E. W. Ryerson:—The most important point in the paper, one with which most of us are familiar, is the value of fresh air in the treatment of these cases. No doubt other methods are also of importance, but not to the same extent as is fresh air. However, it is difficult and sometimes impossible to use fresh air properly in the average hospital. At the Cook County Hospital last summer in the Children's Ward, we succeeded in having awnings put up so that the children could remain outside all day. Every child improved, as was apparent on inspection. The same thing is being done at the Children's Memorial Hospital. Two large balconies are employed for the purpose and the children are kept out there, with the result that they exhibit a uniform improvement.

As to whether children will always have to be kept in the fresh air the remainder of their lives is a matter of great importance. I think we will find that a child cured of tuberculosis will have a recurrence unless it is kept out-of-doors all the time. Of course, we can cure the child again, but the best results will be obtained by instituting a campaign of education, showing the public the necessity of fresh air in tuberculosis and after a cure has been effected.

Dr. Carl Wagner:—I am very much pleased to have listened to the valuable paper of the essayist of to-night. It may not be out of place in this connection to do honor to the man who was the father of the seaside hospitals, Professor Monti. This great friend of the suffering children not only taught the benefit of

seaside air but built out of his own means a hospital at the Adriatic Sea after failing to find financial support from others.

Dr. B. Fischer is the first one to study the ocean air scientifically. In his treatise, *Thalassotherapie*, in 1894, he proved that the air became purer as one traveled seaward, but absolute purity was not reached until about one hundred miles from shore. According to this the islands of Nantucket and Catalina must be considered as the advantageous ones and Madeira the best place for this and also for other reasons.

The use of the syrup *ferri iodid*, as recommended by Lauter-Brounton, has been a routine practice with Pott and Henoch for many years previous. They departed from the idea that in many of these cases, especially the obstinate ones, an inherited syphilitic basis might have to be taken in consideration.

Dr. Whitbeck (closing the discussion):—As to following up these patients after they are discharged from the hospital: In October, 1907, we looked up all the cases discharged since the summer of 1904. We located about 95 and succeeded in examining about 76. Ten children had died of general tuberculosis. Of the 76, a large number lived in the country, where they had been placed through the efforts of the association, their parents moving from the city or the children being adopted by farmers. There were no recurrences in these cases. The children that lived in the city were in good physical condition, although they were not as well nourished as when they lived in the hospital. There had been no recurrence of the disease in these cases.

In regard to syphilitic joints: We do not want to be over-enthusiastic, but we must be on the lookout. Many of our cases had had good orthopedic treatment before they came to us, but failed to show any improvement. The Sea Breeze Hospital was established for tuberculous cases, and if the cases that come to us are apparently not tuberculous, but can be healed with potass. iodid and mercury, we want to do it. If we can not prove that these are cases of hereditary syphilis, the fact remains that mercury effects a cure after all other efforts directed at curing tuberculosis had failed.

Dr. Max Reichmann:—In looking over my records I found nine cases of fracture of the carpal scaphoid, all in the right hand, and all due to cranking an automobile. In seven of the cases there was also a fracture of the radius. These fractures are discovered oftener now than before, because the Roentgen ray is used for diagnosis. Ten years ago text-books hardly mentioned these fractures. The most unusual case I ever saw was one of solitary fracture of the navicular bone of the tarsus. It is absolutely necessary to examine every case of injury of the foot or hand with a Roentgen ray, because the so-called sprains may be serious fractures of bones either of the carpus or the tarsus.

Dr. M. R. Barker:—For a number of years I have been trying to collect data on which I might base a conclusion as to the frequency of fracture of the scaphoid as compared with fracture of the other carpal bones when the force applied was less potent than that which produces a crushing injury. I succeeded in collecting about twenty-five or thirty such cases, and found only four or five in which there was fracture of any other carpal bone due to such injuries. I believe that the position and shape of the scaphoid may account for its more frequent fracture. It is on the outside of the carpus, and enters into the formation of the wrist joint. It articulates with the radius above, and with the trapezium and trapezoid below. The latter two bones articulate with the metacarpals of the thumb and first finger. In falls where the hand strikes violently, as when a Colles fracture is produced, the force is exerted on the thumb and finger first, and is then conveyed directly to the scaphoid. The scaphoid is really a long bone; it has a head, a shaft or neck, and two tuberosities. Fractures usually occur in the shaft or at the point of least resistance. I believe that fracture of the scaphoid will be diagnosed more often as we resort more frequently to the Roentgen ray for diagnostic purposes.

Dr. Brainerd Hunt Whitbeck, of New York City:—I want to call attention to the line of ossification in the scaphoid which shows so frequently in x-ray

plates. Make a radiograph of any case of hand injury, and one will often find this line, which may be mistaken for the line of a fracture. To overcome this I always take a picture of both hands. Then one can tell at once whether it is the fracture line or the line of ossification, because these two bones are always identical in one individual.

Dr. Charles A. Parker:—Several years ago I examined 250 skeletons, but failed to find a single case of fracture of the scaphoid. I would like to ask Dr. Kanavel to tell us what is the appearance of these fractures after union has taken place.

Dr. Kanavel (closing):—The radiographs I showed were taken about two months after the occurrence of the injury, and none of them showed the line of ossification as seen ordinarily.

*Regular Meeting, Jan. 20, 1909*

A regular meeting was held Jan. 20, 1909, with the president, Alfred C. Cotton, in the chair. The subject for the evening was a symposium on syphilis. Papers were read as follows: 1. "The Value of the Spirochæte in the Diagnosis of Syphilis, with Special Reference to the Primary Lesion," by B. C. Corbus.\* 2. "Serum Diagnosis," by W. J. Butler.\* 3. "Dermatology," by James Nevins Hyde.\* 4. "Congenital Syphilis," by Isaac A. Abt.\* 5. "Therapeutics," by William L. Baum. The symposium was discussed by M. Herzog, F. G. Harris, W. T. Mefford, William Allen Pusey, O. S. Ormsby, Daniel R. Brower and Louis E. Schmidt. Adjourned.

DISCUSSION OF THE SYMPOSIUM ON SYPHILIS.

Dr. Maximilian Herzog:—I fully agree with Dr. Corbus that it is important to find the spirochæte in the primary and secondary lesions of syphilis as a means of early and certain diagnosis. However, I do not agree with him when he says that the only safe means of diagnosis is the new dark field illumination. Schaudinn, in 70 cases of primary and secondary syphilis, which had little or no treatment, found the spirochæte 70 times in stained preparations. In 50 cases of the same type Sabernheim found the spirochæte in every case. Mulzer found it 20 times in 22 syphilitic cases, and Geraghty reported last December from the Johns Hopkins Hospital that in thirty cases he had found the spirochæte 27 times.

I was the first one in Chicago to take up the examination of syphilis by the aid of staining for spirochætæ in a systematic manner, and that was done in July and August, 1906, after my return from the Philippine Islands. I examined material from about thirty cases, which was furnished by Dr. L. E. Schmidt. Of that number of cases seven were negative. These cases were either recognized as soft chancres, and were merely used as controls, or later on were found to be soft chancres. Of the remaining twenty-three, I found eighteen primary and secondary lesions, and those cases in which I did not find spirochætæ were cases which had been under mercurial treatment for some time. So a good deal depends upon the experience of the investigator in finding spirochætæ. I can not agree with the statement made by Dr. Corbus, that by the dark field illumination the character of spirochætæ are so absolutely separate, we can be certain what we are dealing with, because I found in a case which I held for a long time to be gumma of the lung, spirochætæ which were exceedingly fine, and of which I have photographs here. So I can only say, I fully agree with Dr. Corbus that it is important to find spirochætæ, and they can be found; but the dark field illumination is not the only method, and we have a reliable method in the staining method. Furthermore, I may say of the dark field illumination, it does not require such an elaborate large arc lamp as some use, but I have fixed up a simple apparatus recently which consists of a three-candle power incandescent

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\*For text of papers see pages 383, 388, 402 and 405.



light, which has a wire inside, with ordinary reflector, and a little lens in front of it, and with this you can find spirochætæ very easily.

In conclusion, the staining method is just as reliable as the dark field illumination, provided you are sufficiently conversant with it.

Dr. F. G. Harris:—Dr. Butler has given a very good exposition of the Wassermann reaction. As you see, he is an enthusiast. The more one works with the Wassermann test the more enthusiastic one becomes. As Dr. Butler did not take up the technique, I shall not discuss that phase of the matter further than to say that it is complicated and it is necessary to control every step. There are some sera which alone bind complement. This property may be original in the serum or it may be due to the fact that the serum had been heated too high in inactivating it as shown by Bruck. In either of these conditions, if it were not for our controls we would conclude that such a serum was syphilitic.

While there have been several methods brought forward to simplify the test, none of them are reliable, so that the reaction as originally enunciated by Wassermann is the only reliable method at present. As to the value of the Wassermann reaction, we may say, all things being equal, that the longer the disease has persisted the stronger the test.

Taking up the various stages of syphilis and the value of the test in those stages, Dr. Butler has told you that he obtained a positive reaction in 90 per cent. of the cases of primary syphilis. That per cent. means that the majority of his cases were examined in the late primary stage. The longer the chancre has been present the more likely are we to get a positive reaction. It is probable that a positive reaction in primary syphilis depends on a dissemination of the infection. If we examine cases very shortly after the onset of the chancre, the majority of the cases will be found negative. So the Wassermann reaction is not a reliable test for primary syphilis, the only absolute method of diagnosing the chancre is by the demonstration of the spirochæte pallida.

In secondary syphilis the reaction is positive in practically 100 per cent. of those cases with symptoms. Cases without symptoms, that is, in the so-called latent cases, 50 per cent. gave a positive reaction. In tertiary syphilis 90 to 98 per cent. of the cases give a positive reaction. Ninety-five per cent. of the cases of parietic dementia and 70 to 80 per cent. of the cases of tabes give a positive reaction.

It is surprising what a large number of people there are who are laboring under the delusion that they have or have had syphilis. This syphilophobia is due to the fact that some physician, on insufficient grounds, has diagnosed a suspicious ulcer as a chancre or a skin eruption as a syphilid. After taking a certain amount of treatment they stop and come to us with all sorts of complaints and delusions. The Wassermann reaction is of immense help in clearing up these cases.

With the exception of the discovery of the spirochæte the Wassermann reaction has done more than any other one thing to enlarge our knowledge of syphilis. It has shown us the mother and child, who, according to Colles' and Profeta's Laws, are immune to syphilis, are so because they have syphilis and a positive reaction in these cases is an indication for anti-syphilitic treatment.

Syphilographers very early recognized the immense value of the Wassermann reaction. Its relation to the other branches of medicine has hardly been appreciated. It is a most valuable help in all branches of medicine and surgery. Cohen, of Berlin, has reported a series of eye cases, in twelve of which the reaction was such as to enable him to make a diagnosis of syphilis. Karewski has shown the value of the reaction in surgical affections, especially in obscure forms of arthritis, jaundice and other hepatic conditions.

Our own experience has shown the great value of the test in renal, cardiovascular and other internal diseases. At the Cook County Hospital we have recently had a case of acute syphilitic endocarditis in which the diagnosis was made by help of the Wassermann reaction. There are probably a large percentage of cases of endocarditis which are of syphilitic origin and which early in the

course, before the pathologic changes had become marked, would have responded to specific treatment.

Frankel has shown that a large number of aneurysms are of syphilitic origin. The so-called Heller's aortitis has now been demonstrated to be a syphilitic affection.

The Wassermann reaction also, we believe, will play a large part in the treatment of syphilis. All cases should be submitted to intermittent tests for the Wassermann reaction and that reaction should be made negative and kept negative. This is the only means we have at present of showing the presence or absence of active syphilis and by controlling our treatment by means of this test and keeping our patients in a state of a negative reaction for the entire period of anti-syphilitic treatment, it would seem that we were pursuing the most logical method of accomplishing an absolute cure of the disease.

Dr. W. T. Mefford:—There is one point which Dr. Butler failed to mention in his paper, and that is, in examining the milk of syphilitic mothers the milk in some shows a positive reaction to the serum diagnosis. In some young infants afflicted with syphilis, which exhibit no signs or symptoms of syphilis, they show positive reaction, while others, the new-born syphilitics, which show no signs or symptoms, would show a negative reaction.

As to syphilitic milk, I am not satisfied as to whether it would transmit syphilis to a non-syphilitic child. I have been unable to follow up this part of the diagnosis for lack of material. I have not been able to follow out in cases in which I have examined infants to see whether children born of syphilitic mothers do not all show syphilitic manifestations at a later period. I would like to examine more of these syphilitic mothers' blood and milk, as well as the blood of the new-born, and will make those examinations gratuitously to establish the fact of heredity or the transmission of syphilis through the milk.

The diagnosis is of special value in treating syphilis. It certainly shows some people accept treatment more readily than others, or that syphilis is more virulent in some than in others. In some people the serum reaction will disappear in from 75 to 85 inunctions, while in others it will take from 130 to 150 inunctions. It will also show that some people who have been treated according to the customary methods of three years' course, that in less than one year they will give a positive reaction, others in five, ten and fifteen years. I examined one after twenty years who was just beginning to show active syphilis.

As pointed out by Drs. Butler, Baum and Harris, these examinations should be made at least once a year, or at the farthest once in two years, to see if syphilis is active. It is a guide to treatment as well as to prognosis.

Dr. William Allen Pusey:—I have nothing to add to the very vivid description of the types of syphilides which Dr. Hyde has given. Indeed, I rather envy the sharpness and clearness with which he has described these various pictures of cases of syphilis. I am afraid, however, that in the very vividness with which he has described the capriciousness and irregularity of some syphilides, he will unwittingly convey the impression to some minds that syphilis as a rule is capricious and unusual in its course. If there is one thing we have to be thankful for in syphilis it is the regular way in which syphilis, as a rule, pursues its course. Infrequently we have so-called tertiary lesions occurring in the secondary period; very rarely we have some manifestations corresponding to those which we call secondary, occurring late in the course of active syphilis; but, thanks be to the gods of clinical medicine, syphilis as a rule shows a regular chronological sequence in the development of its symptoms and we are not often confused by a disturbance in this sequence. It seems to me also that the hearer is apt to get from Dr. Hyde's emphasis of the confusion in diagnosis, which sometimes occurs in these cases, an overestimate of the difficulty in recognizing the cutaneous manifestations of syphilis. Surely mistakes do occur from failure to recognize the syphilitic character of lesions, particularly the ulcerative lesion or later syphilis, but I venture to suggest that these mistakes as a rule are due in the vast majority of instances, not to the obscurity in the manifestations of syphilis, but

to failure to recognize the presence of the plain manifestations of the disease. I believe the fact to be emphasized is that cutaneous syphilis, while it may occasionally seem confusing, is as a rule most definite and sharp in its manifestations.

Dr. Oliver S. Ormsby:—The few remarks I shall make will relate to the cutaneous manifestations of syphilis and they necessarily will have to be brief.

Dr. Hyde pointed out the fact that insignificant early manifestations of the disease are sometimes followed by more or less serious results. I should like to refer to some practical examples illustrating this fact. Several years ago a patient was referred to me who had an ulcerating lesion of the penis supposed to be carcinoma. My duty in the case was to decide which of two proposed therapeutic measures would be preferable, surgical procedure or x-rays. The lesion was a gummatous syphiloderm and potassium iodid with mercury soon entirely relieved the patient. The first diagnosis was rendered largely on a negative history of syphilis early in the patient's career.

Another patient with no history of an initial lesion and no secondary manifestations presented the following history. In 1892 he had one testicle removed surgically for a supposed tuberculous condition. Three years later the other organ was removed in a similar manner for similar reasons. Four years later a large so-called tuberculous ulcer was extirpated from the patient's leg. Some time later he developed what was supposed to be lupus vulgaris of the face, and after suffering with this for two years I first saw the patient. He then had a typical tubercular syphiloderm which was relieved very soon with the usual treatment. The scars on the leg were typical of syphilis and I have no doubt about the fact that the entire chain of symptoms were due to syphilis.

When the question of diagnosis in syphilis is before us the age and social position of the patient should not bias our opinion. Several years ago a patient, an elderly man, appeared at the clinic of Rush Medical College, exhibiting a typical macular syphiloderm. He had just recovered from a surgical operation in which the penis had been amputated for a supposed carcinoma which in reality was an initial lesion of syphilis. The patient's age had much to do with forming the opinion in the minds of his first medical advisers.

We are frequently told that owing to the social position of the patient syphilis is out of the question. This is not a valid objection and should have no weight, as this disease affects every social grade and accidental infections often occur in unexpected places. From 5 to 10 per cent. of initial lesions occur extragenitally. These lesions are found on the lips, tonsils, fingers and other areas and are frequently confusing, and one should always be alert and when a "cold sore" remains unusually long or other apparently simple infection persists and slowly enlarges, an initial sclerosis should be thought of. Recently in Dr. Hyde's practice I saw two patients each with extragenital chancres and in each the lesions were multiple.

Concerning the regularity of evolution as to time of the lesions in syphilis, it is well for one in his early studies to get the old classical description of the disease as divided into stages, but as time passes and cases multiply, the exceptions become so common that one has to practically eliminate from his mind the idea that this marvelous disease progresses with regularity through various stages.

Dr. Daniel R. Brower:—I wish to endorse the remarks of Dr. Church and to emphasize the fact that we would not have as much tabes and parietic dementia if a longer time were given to the treatment of syphilis in the beginning. I am sure the great majority of cases come to us without adequate primary treatment. When are we going to find out what additional factors are necessary to develop upon a syphilitic foundation tabes and parietic dementia? As soon as we have found that out, I believe the prospect for tabetics and parietic dementes will be brighter. It is a most interesting observation that among certain peoples parietic dementia is practically unknown. In the Hospital for the Insane at Honolulu I failed to find a case of general paresis among the native Hawaiians,

and I had the same experience in the Hospital for the Insane at Tokio, notwithstanding the fact that syphilis prevails to a greater extent in those countries than it does here.

Dr. Louis E. Schmidt:—In the light of our modern knowledge of the etiology and diagnosis of this disease, it will not be out of place to say a few words in regard to prophylaxis. Metchnikoff inoculated a large series of monkeys. A second series inoculated in the same manner, place, time and virus was immediately treated with his calomel ointment. In practically every instance did these control cases show signs of syphilis, while those treated with calomel ointment never showed signs of inoculation at any period. Taking this matter into consideration, why not advise it? I certainly have done so and hope that it will be advised more generally. As to its efficacy in man, it can not be vouched for, but with the experiments before quoted it certainly should be seriously considered.

I can recall that twenty years ago it was taught to use the ordinary mercurial ointment following a suspicious exposure. This was entirely from an empirical therapeutic point of view. Now, our knowledge of the spirochæte pallida and Wassermann serum reaction permits of positive investigation.

As to modern methods of treatment, I will mention the treatment of syphilis with extract of initial lesions. Spitzer has just described twelve cases thus treated, each with ten or twelve injections. In all instances secondary rash was present. In one instance no recurrence, but at end of three years apparently a reinfection, i. e., another initial lesion with all secondary signs and symptoms following. This line of treatment is probably more of a novelty and is as yet not established.

Arsenic has commenced to assume a place in the treatment of syphilis. Uhlendorf was the first to note the effect on the organism in "sleeping disease." From analogy it was advocated in syphilis. From what has been written, it requires immense doses to stop the course of syphilis. It apparently causes an increased phagocytosis, and in this way the spirochæte pallida is exterminated. Mercury, as is known, undoubtedly kills the organism, and therefore acts in an entirely different manner. On account of the differences of opinion as to the exact dosage of the various arsenic preparations, their mode of inhibition and also of the many bad reports, I agree with Dr. Baum that it is not yet advisable to take up the treatment of syphilis with arsenic. I also agree with both Drs. Church and Baum as to the length of treatment. Even with the Wassermann serum reaction in mind, it can be stated that our knowledge is not complete as to whether or not treatment is to be discontinued, even if the reaction is constantly negative. In some instances the serum reaction is negative following three to six months' mercurial treatment. Now, if it remains negative, is all treatment to be discontinued? I wish to state that at the present time and the state of our knowledge that it is not justifiable to stop—but to continue the treatment in just the same manner as before our knowledge of the Wassermann reaction. Further investigation and time will answer this very important point.

#### PHYSICIANS' CLUB OF CHICAGO AND CHICAGO MEDICAL SOCIETY.\*

*Meeting, Jan. 27, 1909.*

A joint meeting was held at the Grand Pacific Hotel, Wednesday, Jan. 27, 1909, with Dr. Henry B. Favill in the chair. The subject for the evening was a symposium on "Eugenics." Prof. W. B. Castle, Harvard University, Cambridge, spoke on "The Experimental Study of Heredity, Illustrated with Lantern Slides." Dr. R. R. Gates, University of Chicago, spoke on "Studies of Inheritance in the Evening Primrose," his remarks being illustrated with lantern slides. Dr. Eugene Davenport, University of Illinois, Urbana, discussed "Important Lessons to be Learned from the Breeding of Animals." Dr. W. L. Tower, University of Chicago, detailed his experiments and observations on the modification and control of inheritance, which were illustrated with lantern slides. The discussion was opened by Dr. C. O. Whitman, University of Chicago, and Dr. Charles L. Mix.

\*For text of papers and discussions see pages 406, 412 and 415.



*CHICAGO SURGICAL SOCIETY.*

A regular meeting was held Dec. 4, 1908, with Dr. M. L. Harris in the chair.

*THYROIDECTOMY FOR EXOPHTHALMIC GOITER.*

Dr. Alexander Hugh Ferguson reported a case of exophthalmic goiter occurring in a girl, 22 years of age, in which there were present, in an exaggerated form, all the typical symptoms of this affection. The disease had been present for about five months, the exophthalmos first attracting the patient's attention. Several years previously the girl had suffered quite severely from abdominal cramps. A severe general pruritus and excessive sweating were marked symptoms. The pulse rose as high as 142. Although the patient had a most voracious appetite, she had lost about twenty pounds in weight during the existence of the trouble. A thyroidectomy was done, and the result was a most astonishing one, the symptoms disappearing rapidly within a few days. Even under conditions tending to cause mental excitement there was not the slightest evidence of muscular tremor, which, before the operation, had been quite pronounced. The patient gained over twenty pounds in weight during the first month after the operation.

*DISCUSSION.*

Dr. A. J. Ochsner believes that there is no class of surgical cases which deserves so careful a selection as this. All the cases he has had have been diagnosed over and over again and apparently cured repeatedly, so that from a surgical standpoint the surgical diagnosis does not depend so much upon the diagnosis of Graves' disease as it does upon an operable condition of the patient. If a patient recovers only temporarily under internal treatment he becomes at once a surgical patient. If a patient is beyond the point of temporary improvement by rest and hygienic treatment, then his condition is very serious, and in the author's experience, when he has had one of these advanced patients recover from the operation of thyroidectomy, the benefit has not been great because the blood, the heart, the nervous system, and all of the other tissues of the body have suffered to such an extent that their restoration is impossible.

Regarding anesthesia, he would say that the method he has employed for a long time consists in anesthetizing the patient very slowly with ether, using the Eschmarch mask, or the chloroform mask, and dropping the ether very slowly upon this.

Dr. H. M. Richter referred to the choice of cases, and said that in his limited experience he has seen two patients carried over a long period of time by medical care and who became most marked examples of hyperthyroidism, so that one of them died of hyperthyroidism without operation within a period of less than ten days after the onset of the attack. In the other case the patient, before going to operation, passed through a period in which extensive edema developed from the cardiac failure before she was gotten in a condition for operation. It seems to him that one cannot say the mild cases are the ones for medical care, and the more severe ones for surgical care.

He suggested the use of rectal anesthesia for thyroid cases of all kinds.

Dr. Dean D. Lewis said, in considering the operative statistics of exophthalmic goiter, it is necessary to differentiate between the primary and secondary types. The primary cases, those in which the symptoms develop almost simultaneously with the enlargement of the thyroid gland, are the ones which are followed by the highest mortality. The secondary cases, those in which the exophthalmic symptoms develop upon an old, pre-existing, colloid, parenchymatous or cystic goiter, can be operated upon without a much greater mortality than accompanies operations upon a simple goiter. He emphasized the fact that in many of the primary cases of exophthalmic goiter the capsule surrounding the gland is exceedingly delicate and often veil-like. This is one thing that renders thyroidectomy so difficult in these cases, for it may be very hard to enucleate the

gland from its connective tissue covering and preserve the posterior capsule. This is especially true when the gland is but little enlarged.

Dr. A. I. Bouffleur, in referring to the mental condition, said that his own personal experience has been that in those patients who are fairly wild from intoxication a radical operation is contraindicated, but fortunately in these ligation of the blood vessels will reduce that toxic condition, and in the course of a few days, or perhaps not for a few weeks, one can resort to a radical operation with safety.

The author is partial to local anesthesia in operations for goiter. He has had the experience of operating six times in one family for goiter, three of them having been of the exophthalmic type. There were two sisters. He did the operation in one under ether, the other under local anesthesia, on account of a distorted trachea.

#### TREATMENT OF TETANUS.

Dr. William Hessler said that the tetanus toxin forms a firm union with the motor nerve cells of the cord and medulla. The toxin reaches the cord by way of the motor nerves. A portion enters the nerves in the region of the wound, another portion enters the general circulation, and enters the motor nerve endings throughout the body. That portion which passes up the shortest motor nerves produces the first clinical symptoms, namely, trismus. Once in the nerves and cord no remedy can reach the toxin to neutralize it or break up its combination with the nerve cell. Antitoxin, no matter how administered, can reach only such portion of the toxin still free in the tissue juices, outside of the nervous system. Therefore, the many different methods employed for the administration of antitoxin have no advantage over the subcutaneous or intravenous method of injection. Combined with the free administration of antitoxin and other general measures, the injection of magnesium sulphate by lumbar puncture will tide many cases over to a favorable termination.

#### DISCUSSION.

Dr. L. L. McArthur said that as long as we let the condition go until the development of the nervous symptoms before making a diagnosis, just so long will we be handicapped in our treatment of this disease. He divided the subject of the treatment of tetanus into that of incipient tetanus and terminal tetanus, the one hopeful, the other very hopeless. If the facilities are not at hand for making cultures of the secretions from the wounds in which tetanus would be likely to occur, then treat the case as tetanus just as you would treat a case of diphtheria before cultures are made. If we are suspicious of the case being one of diphtheria, give antitoxin; so in the case of tetanus we should follow out the proper surgical procedures.

As to the use of balsam of Pern, we have gotten back to it because it contains the best known organic antiseptic—cinnamic acid, cinnamic alcohol. This acid and this alcohol have an efficacy as to the killing of bacteria equal to bichlorid of mercury, one to one thousand, but with this advantage, that cinnamic acid and cinnamic alcohol are slowly soluble in water.

Dr. D. W. Graham believes that in the case of wounds in such conditions the surgeon should excise the infected tissues extensively, where a wound involves a finger, a toe, or superficial part of the body, where this can be done, and he has always advised it so as to make it a cleaner wound. In this way we get rid of some of the infective bacteria that continue to develop toxins in the wound.

Dr. Daniel N. Eisendrath said it is very essential to impress upon the general practitioner the fact that the tetanus bacillus is present from the beginning in these cases, and that it is unnecessary to wait for the paralytic symptoms before we can hope to do something. He fully believes in a routine radical treatment and disinfection of such punctured wounds, whether received from blank cartridges or from rusty nails. He invariably anesthetizes these patients and removes all necrotic tissue, applying thereafter carbolic acid and alcohol. He

makes it practically a major operation under anesthesia, and, putting on a constrictor, he cuts away all the necrotic or blackened tissue he can see, in order to get a freshened wound surface. He follows this up immediately with regular systemic treatment, namely, tetanus antitoxin.

Dr. D. A. K. Steele protested against the spirit of pessimism which seems to prevail in the treatment of the later cases of tetanus. Admirable results have been obtained by the proper early treatment of suspicious wounds. The World's Fair construction opened our eyes as to the possibilities of prophylaxis in the treatment of tetanus, and Dr. Plummer deserves credit for calling attention to that; but the experience of Italian surgeons in southern Italy, in Naples particularly, and the experience of many American surgeons as to the efficacy of saturating these patients with normal salt solution, who have developed trismus, who had the late symptoms of the disease, have been so satisfactory, and with an increasing percentage of recoveries, that he thinks we all should be just as strenuous in carrying out the saturation of these patients with normal salt solution as we would in carrying out prophylactic treatment in the initial cases.

Dr. Louis A. Greensfelder reported a case of a child who developed tetanus following an ordinary vaccination. In another instance tetanus followed circumcision. In a third case tetanus followed a double amputation for a crushing injury, one a little above and the other below the knee. In another case recently seen, where there was no apparent external evidence of injury, after examination a punctured wound was found at the end of the finger, due to a fish-bone, showing it is not always easy to resort to prophylactic measures because of the nature of the wound and the manner in which the tetanus organism was introduced.

Dr. M. L. Harris said they have carried out the prophylactic treatment of tetanus for some time at the Alexian Brothers' Hospital and have not had a case of tetanus develop in the hospital that they have had an opportunity of treating prophylactically. As to the use of sulphate of magnesia, he has used it now in three cases, two of which recovered and one died. The one that died was a little boy, brought into the hospital with tetanus, and he saw him a short time after his arrival; gave spinal injections of 3 c.c. of a 25 per cent. solution of sulphate of magnesium. All spasms disappeared, but the boy died unquestionably from heart failure. Of the other two cases that recovered, one received several injections into the spinal canal, and every injection was followed by immediate cessation of the spasms. When it became apparent that the spasms were returning he was given another intraspinal injection. He was one of the very acute or fulminating cases that has recovered. The other one was a more chronic case, treated by several injections of sulphate of magnesia, and recovered.

He believes that the treatment of tetanus must resolve itself into preventing death from the spasms until the patient has time to break up the combination of the toxins with the cells and eliminate them. The sulphate of magnesia stops the spasm, and if we can use the right amount of it he believes we can prevent the spasms and thus give the patient time to break up the combination and recover.

#### *CHICAGO GYNECOLOGICAL AND CHICAGO SURGICAL SOCIETIES.*

A joint meeting was held Jan. 22, 1909, with Dr. Henry F. Lewis, President of the Chicago Gynecological Society, in the Chair.

#### *NEPHRECTOMY FOR PERSISTENT HEMATURIA.*

Dr. Samuel L. Weber showed a kidney removed from a woman, 41 years of age, on account of persistent hematuria, which could not be controlled in any other way. The extreme upper pole of the kidney disclosed an anemic infarct, and it is thought that hemorrhage came from one of the papillae of the kidney.

## ARTERIOSCLEROSIS OF THE UTERUS.

Dr. Weber showed a uterus removed from a woman 40 years of age. She had had six or seven children, several abortions before, and a year ago had a miscarriage at four months, and since then has had menorrhagia. He removed the uterus by the vaginal route, applying two clamps to each broad ligament.

## LONG AND LARGE APPENDIX.

Dr. Carl Wagner showed an appendix nine inches long which he had removed from a woman, 55 years of age, who had not been sick except three days before the operation. The appendix was about the size of the index finger and contained four stones.

Dr. Wagner also exhibited a specimen of carcinoma of the clitoris removed from a woman of 52. The disease involved the left vulva, as well as glands. The glands were removed with the clitoris.

## MULTILOCULAR CYST OF THE OVARY.

Dr. Henry F. Lewis showed a ligament as the result of a ventrosuspension of the uterus. The patient was a woman, 26 years of age, married four years, and had never borne any children. Three years ago she was operated on, the operation consisting in sewing the uterus forward to the abdominal wall. At the time the report was made the appendages were said to be normal. She had very few symptoms of any trouble until three or four months before she came to him. She had had three menstrual periods, amount of discharge being greatly diminished in each. She had nausea, increased micturition, with other symptoms indicative of pregnancy. Examination disclosed a soft tumor as large as an orange on the right side. The left side was apparently negative. The uterus was retroverted, bound down to the posterior part of the pelvis by tight adhesions which could not be absolutely freed. There was no motion of the uterus by bimanual manipulation. Operation did not disclose ectopic pregnancy, but an ordinary multilocular cyst of the ovary, which was removed with the tube, which was closely connected with it. The interesting point was the specimen of elongated artificial ligament running from the abdominal wall in the median line a few inches above the pubes to the fundus of the uterus, and which was found far back in the depths of the pelvis. The ligament measured five inches and a half.

## ANEURYSM OF THE AORTA.

Dr. Arthur Dean Bevan presented a patient, 28 years of age, fireman by occupation, who gave a history of a specific lesion dating back ten or twelve years. Within the last year and a half patient has developed a large aneurysm at the junction of the ascending with the transverse part of the aorta, and patient came to him the first part of December suffering much pain. He was unable to move his right arm, he could not lie down and sleep, and there was an absence of radial pulse in the left arm. He had a good x-ray picture taken, first, to show the exact location of the aneurysm, and then, with the assistance of Dr. Dean Lewis, he wired it on the 10th of December. A gold trocar was inserted on the outside to the right of the median line, to a distance of an inch and a half, but he did not get it into the aneurysmal sac. Then he withdrew it and introduced it a little to the left of the median line, about two inches, when blood began to trickle drop by drop slowly from the trocar. He then introduced fifteen feet of gold wire through the trocar and applied about thirty cells (about 50 milliamperes) of electricity, the positive pole being applied to the wire and the negative to a large lead plate, upon which the patient rested. The current was passed through the wire for about three-quarters of an hour. The process was not very painful. When the current was first turned on the patient could only stand about thirty milliamperes; this was gradually increased to forty, and finally to fifty milliamperes. There has been a marked improve-



ment. Pulsation is no longer noticeable in the sac. Pain has disappeared entirely. The patient can move his right arm, but was unable to do so when he came on account of pain. He can lie down in the recumbent position and sleep with comfort. In addition to this treatment, for a short time after the wiring of the aneurysm the patient was placed upon small doses of iodid of potassium.

GUNSHOT WOUND OF THE LIVER, RIGHT KIDNEY, LEFT LUNG, OF THE HIP; TRAUMATIC ANEURYSM OF LEFT SUBCLAVIAN; OPERATION; RECOVERY.

Dr. A. E. Halstead:—This first patient, an Italian, aged about forty, was admitted to St. Luke's Hospital on Nov. 2, 1908, after being shot from behind a short time before. Five shots were fired at him, four of which took effect. The first entered the tenth interspace on the right side, three inches from the median line behind, and passed completely through the body, penetrating the chest wall, pleura, lung and liver, breaking its exit in front through the sixth costal cartilage about three inches from the median line. The second entered just below the twelfth rib, two inches from the median line on the right side, and penetrated the right kidney, passed in front of the ascending colon, and lodged in the muscles of the abdominal wall. The third entered the right hip on a level with the upper margin of the great trochanter and passed downward and out three inches above the knee, on the internal aspect of the thigh. The fourth passed through the upper part of the left scapula, upward, and through the scapula, apex of left lung, and out in front. The wound of exit made by this bullet was just below the clavicle at a point corresponding to the junction of its outer and middle thirds. The wound of entrance was about two inches from the median line and just below the spine of the scapula.

On admission, about thirty minutes after the shots were fired, the patient was suffering from the effect of the loss of a large quantity of blood. There was no radial pulse. His bladder was full of blood, as was his abdominal cavity. The abdomen was immediately opened through a right rectus incision, and found filled with fresh blood. The wound in the liver could not be reached until the lower costal cartilages were cut and retracted upward. The wound of exit of the bullet in the liver was large enough to admit the tips of three fingers; from this the blood spurted in large jets. By passing the fingers underneath the liver the wound of entrance was located. To control the hemorrhage an attempt was made to utilize the greater omentum to plug the opening. This was found inadequate, and a yard of iodoform gauze was drawn through the liver, from before backward. This, with the omentum, which was plugged into the large, flaring wound of exit, controlled the hemorrhage completely. The abdominal cavity was partially cleared of blood, when the wound leading from the kidney was seen. From this blood flowed freely into the peritoneal cavity. The wound in the anterior abdominal wall was closed, the patient turned on his left side, and the kidney exposed by a lumbar incision. A large tear was found in the kidney, extending from the convex surface through just below the hilus, and opening the pelvis. The condition of the patient did not justify a nephrectomy. The hemorrhage was therefore controlled by packing with iodoform gauze. During the operation the patient was given a quart and a half of salt solution, containing a dram of 1-1000 solution of adrenalin. A hurried examination of the patient before taking him from the operating room revealed the presence of fluid in both pleural cavities, and a hematoma of small size beneath the skin around the wound of exit of the bullet that penetrated the left side of the chest. The bladder was irrigated, removing a large quantity of fluid and clotted blood. Patient returned to the ward with a fairly good pulse of 160.

The progress of the case was extremely satisfactory for ten days. A small quantity of bloody urine escape from the kidney wound during the first three days. The gauze packing in the liver was removed on the third day and for it substituted a small tubular drain. Excepting at the point of drainage, the

abdominal wound healed by primary union. The tubular drain was removed from the liver on the eighth day. On the tenth day the patient complained of a feeling of numbness in his left hand. The night preceding he had coughed violently and had expectorated a good-sized clot of blood.

Examination revealed a swelling, pulsating and expansile, just below the left clavicle and extending in the axilla. At this time the swelling was about the size of a small orange. The pulse was absent from the left radial. This tumor increased rapidly in size. The hand was distinctly cooler than the opposite and the feeling of numbness was increasing. At the end of forty-eight hours, in spite of compression, the tumor had nearly doubled in size. There was a distinct bruit to be heard over the swelling, which still retained its expansile characteristic. The diagnosis of aneurysm of the left subclavian, probably beginning at its *outer third*, was made, and ligation decided upon.

On the twelfth day after the injury the operation was performed. The usual incision for ligation of the three portions of the subclavian was made. Difficulty was encountered in finding the artery. To facilitate this three inches of the clavicle was resected. In making an attempt to ligate the vessel the aneurysmal sac was ruptured. This was followed by a profuse hemorrhage, which was controlled by plugging the proximal portion of the artery with the left index finger of the operator. It seemed inadvisable, owing to the condition of the patient, to attempt to ligate the vessel proximal to the aneurysm, so an eight-inch forceps was passed along the index finger in control of the hemorrhage and clamped on the proximal portion of the vessel. The distal portion was ligated and the aneurysmal sac opened freely, the clots turned out, and the cavities packed with gauze.

The forceps were removed from the artery on the third day following. Gangrene of the hand and forearm followed, necessitating amputation at the elbow.

After this the patient rapidly recovered and is now out of the hospital.

GUNSHOT WOUND OF LEFT CHEST, PENETRATING THE PERICARDIUM, DIAPHRAGM AND SPLEEN; SPLENECTOMY, AFTER SUTURE OF PERICARDIUM AND DIAPHRAGM; RECOVERY.

This second patient, a man, 34 years of age, was admitted to St. Luke's Hospital on Oct. 5, 1908, *in extremis*, suffering from a self-inflicted gunshot wound of the left chest. The weapon used was a cheap 38-caliber revolver. The bullet wound was just below the lower margin of the third costal cartilage and half-way between the mammary and midsternal lines. On examination the patient appeared to be *in articulo mortis*. No radial pulse could be felt. On auscultation over the precordia only the faintest heart tones could be heard. The thorax was rapidly opened through a curved incision below the fifth costal cartilage. A flap of soft tissue with fifth and fourth costal cartilages was turned up after the cartilage had been divided at both ends of the incision with a bone forceps. The pericardium was exposed. A wound of the pericardium, an inch in length, extending down and back through its lower part, was found. Below a wound that would admit four fingers was found in the diaphragm; through this the greater omentum had become dislocated and had entered the pericardium. After removing the omentum and a few clots of blood the pericardium was sutured with fine catgut.

Through the lid in the diaphragm blood flowed freely from the abdominal cavity; the thorax was cleaned of blood, and the diaphragm sutured from its convex side with a running suture of Pagenstecher linen.

The abdominal cavity was then opened through a left rectus incision, and the spleen explored. This was found broken into several fragments. The lower costal cartilages (6 inches to 7 inches) were cut in line with the abdominal incision and reflected outward, giving ready access to the spleen, which was removed after ligating the vessels at its hilus. The fundus of the stomach had been deeply grooved by the bullet cutting through the peritoneal and muscular coats, but apparently not opening this viscus. This wound was closed

by a running suture of linen, and the blood in the abdominal cavity was removed and the wound closed by interrupted through and through sutures of silkworm gut. No drainage. Patient made a rapid recovery without any untoward symptoms, which could be attributed to the removal of the spleen. The leucocyte count ranged during the first six days from 14,000 to 18,000 and then dropped to normal. No change was noted in the lymph glands.

Dr. L. L. MacArthur had had four or five cases of simple hemorrhage of the kidney to deal with, and said in each case it was quite feasible to check the hemorrhage by opening the kidney and packing it.

Dr. A. E. Halstead mentioned a case he had several years ago in which a diagnosis of stone in the kidney was made. The woman had had profuse hemorrhages at intervals of two or three months. He opened the kidney, expecting to find a stone, but found a cavernous angioma projecting into the pelvis of the kidney, which was removed. He excised a portion of the kidney with the tumor and sutured the kidney. The patient made an uneventful recovery. He suggested cavernous angioma of the kidney as a possible source of hemorrhage.

Dr. E. Wyllys Andrews said that wounds of the diaphragm nearly always caused a traumatic hernia, and he, as well as other surgeons, had made the mistake of dealing with a number of them from the peritoneal side. Nearly every wound of the diaphragm ought to be repaired by opening the pleural cavity.

Dr. Daniel N. Eisendrath endorsed the great advantage of tamponade for gunshot wounds of the liver, and related a case in which it took twenty-five yards of gauze to control the hemorrhage. The patient recovered, barring the complication of empyema, which required opening later on.

Dr. A. E. Halstead said that in wounds of the liver, particularly of the left lobe, he has in two instances used the great omentum in gunshot wounds, plugging the opening with it. He tried this in the first case reported, but the wound was too large, and the omentum was not large enough to control the hemorrhage. It could only be controlled by gauze packing.

Dr. Emil Ries narrated the case of a man who came to him with hematuria. Cystoscopic examination showed that blood came from the left ureter, not from the right. In this case he split the kidney, but found nothing—no tumor, no stone. He decapsulated the kidney, and in three days the hematuria ceased. If he had lost track of this man he might have thought he was cured, but he returned a year later, with hematuria again. Cystoscopic examination again showed that blood came from the left kidney. He extirpated this kidney, and found no trace of a pathologic process except a hemorrhagic nephritis. The man has been well since.

Dr. William E. Schroeder pointed out that the removal of the kidney for simple hemorrhage is a procedure which is quite out of proportion to the condition, and the only exception for removing it would be uncontrollable hemorrhage after opening it and packing it.

Dr. E. W. Andrews asked whether any of the Fellows could report a case of hematuria following the use of urotropin.

Dr. Alex. Hugh Ferguson recalled one patient to whom he gave fifteen grains of urotropin, three or four times a day, after a nephrotomy for hemorrhage, because there was suppuration in the wound, and he thought it would aid materially in getting rid of the pus. Instead, however, it caused hematuria from both kidneys.

#### TUBERCULOSIS OF THE KIDNEY IN THE MALE AND FEMALE.

Dr. Arthur Dean Bevan said that in a series of more than five thousand postmortems three per cent. were found to have tuberculous lesions of the kidney, and of a large series of postmortems of individuals dying of tuberculosis ten per cent. were found to have tuberculosis of the kidney.

The author discussed the etiology and symptomatology of renal tuberculosis at length. Passing on to the treatment, he said that three methods have been advocated. First, the general hygienic treatment, which is employed in lung tuberculosis. Second, the specific treatment with tuberculin. Third, the surgical treatment.

General hygienic treatment is of great importance, as in all cases of tuberculosis. Fresh air, proper nutrition, and rest are of much value and should always be insisted upon.

The specific treatment with tuberculin is at present on trial, especially as advocated by Wright in very small doses, and controlled by determining the opsonic index.

Regarding the surgical treatment, we owe our present knowledge of tuberculosis of the kidney to the general surgeons and the surgical specialists, who have had the opportunity of examining tuberculous kidney and ureter and bladder in the living, and who have been able to follow these cases and watch the results of the various operations which have been undertaken for the cure of the disease. Primary nephrectomy for early unilateral kidney tuberculosis can be done with less than ten per cent. of mortality. In Kummel's last series of 69 cases the mortality was only 2.7 per cent., and with the prospect of curing about eighty per cent. of the cases. In the light of present knowledge we must conclude that in unilateral renal tuberculosis early nephrectomy is the best treatment. This should be combined with the well-recognized hygienic treatment of tuberculosis.

In bilateral renal tuberculosis the treatment should be hygienic, plus possibly the specific treatment with tuberculin, until at least its value has been proven or disproven, and, where especially indicated, such palliative, surgical measures as nephrotomy and drainage.

#### DISCUSSION.

Dr. L. L. McArthur re-emphasized the fact that tuberculosis of the kidney, like the acute infections, is usually unilateral. It has been his experience to find tuberculosis of the kidney very much more frequently on the left than on the right side, and to have had it in all the cases he has had in females, instead of males, with the exception of two instances. He has been impressed with the remarkably hopeful prognosis from his experience gained in removing tubercular kidneys, for when one finds a kidney, the ureter and bladder involved in tuberculosis with the kidney he is inclined to throw up his hands and send the patient to another climate and another physician. The removal of the tubercular focus in the kidney will most frequently cure the tuberculosis of the ureter and bladder. He has observed this a number of times, that the mere removal of tubercular kidney, without doing aught for the ulcerations in the bladder, has sufficed to relieve the bladder condition. In a case in which a bilateral tuberculosis obtains, as shown by segregation of the urine and the detection of tubercle bacilli, the vaccine treatment offers as good prospects of results as any treatment yet advised.

Dr. M. L. Harris has operated on several cases of bilateral tuberculosis, with increasing favorable results. Tuberculosis of the kidney is usually a unilateral affection, and it only becomes bilateral at some more subsequent period. If that is the case, and he thinks it is, there must be a time when bilateral tuberculosis occurs, when one kidney is more extensively involved than the other, and if we get a case when the second kidney is not extensively implicated the removal of the kidney which is the more extensively involved will result in a cure. He has knowledge of several cases of this kind in which the results have been extremely favorable. A short time ago a young lady called to see him from whom he had removed the kidney on one side over three years ago. She had had extensive bilateral tuberculosis. She was still well and in a good state of health. He does not take the doleful view of bilateral tuberculosis that he formerly did.



Dr. Alex. Hugh Ferguson recalled a case of tuberculous of both tubes, with tubercle bacilli coming from the kidneys. When the tubercular tubes were removed the tubercle bacilli from the kidneys disappeared. It is possible to have tubercle bacilli in the urine without the kidneys being involved, consequently a very careful examination should be made of the different organs to see if there is any primary tubercular focus.

Dr. A. J. Ochsner agreed with Dr. Harris that in a number of apparently hopeless cases, cases of bilateral tuberculosis of the kidney, the patients have recovered and have remained well for many years after the removal of the more extensively involved kidney. This fact has induced him to look upon these cases in a more hopeful way than formerly.

Dr. Victor J. Baeus said, with reference to albumin being found in the urine of the remaining kidney in renal tuberculosis, that some two years ago Albarran reported his experience and observation in eight cases of this type. The amount of albumin found in the urine varied from one-half per cent. to three-quarters per cent. The kidney, although secreting albumin, did not show by the urine any pathologic changes, and the patient was in perfect health. He explains this on the basis that the kidney, although not tubercular, had been injured by the toxin of the diseased kidney and had never regained its primary physiologic function.

Dr. Emil Ries said that the only case of bilateral tuberculosis of the kidney in which he obtained anything like a favorable result was one on which he operated nine years ago. In this instance there was tuberculosis of the bladder and extensive tuberculosis of one kidney. One kidney discharged quantities of pus and tubercle bacilli. From the other kidney there came turbid urine, but only a few tubercle bacilli and a small quantity of pus. He removed the badly diseased kidney with the ureter down to the bladder. The patient never had completely clear urine, but was nevertheless able to attend to her work and to enjoy life.

Dr. L. Feingold stated, in connection with Dr. Harris' remarks, that after removing the badly infected kidney the other kidney became cured after a while. He does not think the cure results from the fact of the other kidney having been removed, but that tuberculosis being a slow, chronic infection, the comparatively healthy kidney undergoes a compensatory hypertrophy and becomes accustomed to doing the work of both kidneys.

Dr. Gustav Kolischer pointed out that one of the primary symptoms in tuberculosis of the kidney is frequency of urination. This is especially true in young women and girls, and any time one finds this symptom in them, where other symptoms can be excluded, one should think of tuberculosis of the kidney. Another symptom is a change in the ureteral orifice which has a slit or a cleft in it, and where the ureteral orifice is changed in its configuration to a slit or round hole one should think of tuberculosis. This becomes a certainty if in the neighborhood of the ureteral opening ulceration or infiltration is found.

Three years ago he made a diagnosis of tuberculosis of the kidney in a young girl by draining one kidney and finding the urine infested with tubercle bacilli, while the other kidney was apparently normal. He removed the tubercular kidney, and the woman recovered, but the fistula she had never closed. He saw the same patient in consultation. The family physician thought of all kinds of extensive operations, which he did not advise. This woman was subsequently cured for by Dr. McArthur, who applied the vaccine treatment, with the result that the fistula closed inside of two weeks. He cited a similar instance.

#### ACUTE DILATATION OF THE STOMACH AND DUODENUM POST-OPERATIVE.

Dr. William E. Schroeder discussed the anatomical peculiarities of the mesentery and ileum, the position of the patient, and said that experimentally he has been able to produce dilatation of the stomach on cadavers by slight traction on the mesentery. In the acute cases the onset is sudden. There is vomiting,

pain, passing of flatus. Vomiting may be fecal. The abdomen is distended, especially in the epigastric region. Succussion is present. Temperature rises; pulse ranges from 145 to 160. Collapse may follow. In the chronic cases the onset is slower, but otherwise the clinical picture is the same as in the acute cases. The prognosis is bad, in that 70 per cent. of these patients die if left to themselves. Treated cases do much better. Treatment consists of rectal feeding, elevation of the foot of the bed, and washing out of the stomach every three or four hours.

#### DISCUSSION.

Dr. E. Wyllys Andrews said that since several members of the society have reported cases of dilatation of the stomach post-operative, and since the résumé given in 1895 of forty cases, they have all come to realize the appalling condition from its suddenness and from the fact that surgeons are more or less responsible for deaths which are preventable, not only general practitioners, but surgeons who let patients die in their hands. Perhaps sepsis plays a part in acute dilatation of the stomach, but this condition can not be distinguished always from post-operative ileus. If the condition is identically like that of post-operative ileus, clearly one can do very little harm, but may do good by washing out the stomach in every case of suspected post-operative ileus or acute dilatation.

Dr. A. E. Halstead has had two cases of acute dilatation of the stomach post-operative, both terminating fatally.

Dr. A. J. Ochsner recalled a case of gastroenterostomy for pyloric obstruction due to cicatricial tissue formation following an ulcer of the pyloric end of the stomach, the patient having apparently recovered, but two or three days afterwards, while sitting up, she suddenly complained of pressure, and immediately her pulse increased rapidly, and in an hour she was dead. Postmortem examination showed that a kink at the point of attachment of the jejunum caused closure, and the stomach crushed the heart until the patient died of pressure upon the heart. He has a standing order now that if there is any distention of the stomach, any vomiting after operations, the stomach is washed out regularly.

Dr. Lester E. Frankenthal drew attention to the absence of feces in the vomit in cases of dilatation of the stomach, saying this is one of the chief differential signs and would lead to an early recognition of the trouble.

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#### GREENE COUNTY.

The regular meeting of the Greene County Medical Society was held in the parlors of the Illini Club at Carrollton Friday, March 19, 1909. Called to order by the president at 11:30 a. m. Roll call showed the following present: F. H. Russel, Eldred; E. G. Proctor, Kane; L. O. Hamilton, Roodhouse; James Squires, J. W. Adams, Howard Burns, E. S. Gooch, R. H. Bigger, G. W. Ross, W. F. Waggoner and J. J. Ehrsmann, Carrollton; H. W. Chapman, W. C. Day, E. K. Shirley, J. W. Redwine, G. W. Burns and H. A. Chapin, White Hall. Visitor, A. E. Meisenbach, St. Louis, Mo. Very interesting and instructive papers were read by Dr. H. W. Chapman, "Purulent Pleurisy or Empyema;" Dr. A. E. Meisenbach, "Cancer of the Breast," illustrated with drawings; Dr. F. H. Russel, "Gastritis." The censors reported Kane as the next place of meeting, June 11. Essayists for Kane meeting: E. G. Proctor, Kane; C. R. Thomas and L. O. Hamilton, Roodhouse; W. F. Waggoner, Carrollton. This meeting was the best in the history of the society and we hope to surpass it at Kane and have every physician in the county present.

H. A. CHAPIN, *Secretary*.

## JACKSON COUNTY.

The first quarterly meeting of the Jackson County Medical Society was held in the offices of Dr. A. R. Carter in Murphysboro, Ill., Thursday, March 18, 1909, at 1 p. m. The following were present: Drs. Molz, President, Carter, Vice-President, Grizzell, Sabine, Ormsby, Roth, Tweedy of Oraville, and Essick, Secretary-Treasurer. The following program was given: Dr. Ormsby presented an interesting genitourinary case with three external openings into the bladder due to traumatic stricture of the urethra. The doctor read a very able paper concerning the case, giving his mode of operating and after-treatment. The discussion was opened by Dr. Molz. Dr. Sabine read a well-prepared paper on Bronchopneumonia, outlining the treatment thoroughly. Discussion opened by Dr. Roth. Dr. Grizzell gave an excellent paper on Gonorrheal Ophthalmia, which was highly instructive. Discussion opened by Dr. Ormsby.

## MADISON COUNTY.

The Madison County Medical Society met in the rooms of the Collinsville Business Men's Club in Collinsville, Ill., on March 5, 1909, at 2 p. m., President S. T. Robinson in the chair. Members present: Drs. Kaeser, Hastings, Binney, Harlan, Wadsworth, J. H. Fiegenbaum, Yerkes, Tulley, Smith, Everett, Ferguson, Fisher, Barnsback, Sims, Door, Siegel, Burroughs, Taphorn, Robinson, Harrison, Schmidt, Schroepfel and E. W. Fiegenbaum. Minutes of last meeting read and approved. Board of Censors report that action on the applications of Drs. Emma Howe and Parl P. Howe be postponed on the ground of non-residence. Adopted. The application of Dr. F. W. Larrabee, of Alton, was referred to the Board of Censors. The following resolution was introduced by Dr. Waldo Fisher.

WHEREAS, Certain so-called fraternal organizations have seen fit to use the medical profession as a tool, to induce people to join their societies, by hiring a doctor to furnish medical and surgical services to members and their families for a paltry sum per year; be it

*Resolved*, That any physician who enters into an agreement to give his services for a stated sum, less than regular fees, to any person, society or fraternity, is not eligible to membership in the Madison County Medical Society.

On motion the resolution adopted.

A letter was received from our state president, Dr. J. E. Pettit, stating his desire to visit our society on March 31st. On motion of Dr. Fisher the secretary was instructed to notify Dr. Pettit that the society would gladly receive him, and the president and secretary were authorized to arrange for a meeting to be held in Edwardsville on date above mentioned. The secretary was instructed to notify the secretaries of medical societies in adjoining counties of above meeting and invite the members of these societies to be present.

Dr. G. H. R. Schroepfel presented a clinical case for examination and the chair appointed as a committee Drs. Taphorn, Ferguson, Everett, Tulley and Harrison. Committee's report: Hyperchlorhydria and probably pyloric ulcer.

The essayist of the day, Dr. R. W. Binney, then read a very comprehensive paper on "Diagnosis Between Duodenal Ulcer and Gallstone Disease," bringing out the very latest differential points on this very obscure subject. The paper caused a very general discussion which was ably led by Dr. J. Morgan Sims, of Collinsville.

Dr. R. W. Binney moved that the invitation of the superintendent of the Lutheran Hospital of Granite City be accepted and that we hold our next meeting on the first Friday in June in Granite City. Carried.

On motion adjourned.

E. W. FIEGENBAUM, Secretary.

## NEWS OF THE STATE.

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### PERSONAL.

Dr. and Mrs. Henry S. Gradle, of Chicago, sailed for Italy March 15.

Dr. John B. Legnard, Waukegan, sailed for Europe February 16.

Dr. Overton Brooks, Chicago, has returned from abroad.

Dr. W. L. Downey, of Wenona, Ill., has recently returned from Hot Springs, Ark.

Dr. Henry M. Drury, Altamont, who was adjudged insane, has been committed to the State Hospital, Anna, Ill.

Dr. Rosa Englemann, for nearly fourteen years a medical inspector of the Board of Health of Chicago, has resigned.

Dr. Elmer E. Henderson, of Chicago, has been appointed a member of the consulting staff of Cook County Hospital, vice Dr. Daniel R. Brower, deceased.

Dr. George A. Zeller, superintendent of the Illinois Hospital for the Incurable Insane, South Bartonville, returned recently from a trip of observations and study through Europe.

Dr. Shelley B. Hall has been elected president; Dr. Joseph P. Comegys, vice-president, and Dr. Emily Wright, secretary-treasurer, of the medical staff of St. Anthony's Hospital, Rock Island.

Dr. A. B. Carey, Sr., accompanied by his two sons, Dr. A. B. Carey, Jr., of Pittsfield, and Dr. Ben Carey, of Griggsville, left recently for Rochester, Minn., to undergo a delicate surgical operation.

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### NEWS.

During the recent examination for internes in the county hospital and the county institutions at Dunning, 120 applicants were present.

Representative Chipperfield reintroduced his bill for the establishment of a surgical institution for the treatment of children under the age of 14 years, a measure introduced by him two years ago.

A special committee, of which Dr. William Cuthbertson is chairman, has been appointed by the Chicago Medical Society to investigate the claim of Dr. Samuel Guthrie as the discoverer of chloroform.

The physicians' staff of St. Anthony's Hospital, Rockford, met for organization February 26 and elected the following officers: President, Dr. W. Grant Hatch; vice-president, Dr. Emil Lofgren, and secretary-treasurer, Dr. George P. Gill.

The Hoopeston city council recently passed an ordinance prohibiting the throwing or distribution of "patent medicine" samples on doorsteps, sidewalks, streets and alleys of the city. Samples may be left at any residence if handed to an adult.



One Charles McCormick, of Chicago, who was charged with criminal libel by reason of a pamphlet containing a scurrilous personal attack on Mayor Busse, which is said to have been circulated, was recently arraigned in the Criminal Court of that city, pleaded guilty and was fined \$50 and costs.

If the plan proposed by the State Board of Charities to the present legislature goes into effect and the appropriation of \$803,000 sought is granted, three special colonies for epileptics will be established in the state—one at Kankakee, one at Anna, and a third for feeble-minded epileptics at Lincoln.

An institution to be known as the Chicago Fresh-Air Hospital, to be conducted in Cook County without pecuniary benefit, has recently filed papers of incorporation at Springfield. Dr. Albert J. Ochsner and Ethan A. Gray appear as promoters. A tract of twenty acres is to be chosen immediately as a site for the institution.

The following persons were appointed, March 1, by the governor as members of the Commission on Occupational Diseases, and authorized by the General Assembly: Dr. George W. Webster, Chicago; Dr. James A. Egan, Springfield; Hon. David Ross, secretary of the Bureau of Labor Statistics; Hon. Edgar T. Davies, chief factory inspector; Prof. Charles R. Henderson, James Simpson and Drs. Ludvig Hektoen, Alice Hamilton and Arnold C. Klebs, Chicago.

The Cook County Civil Service Commission held an examination, March 9-11, for internships at Cook County Hospital and the Dunning institutions. The service at Dunning is for one year and includes a compensation of \$12.50 per month, with board, lodging, laundry and an additional \$150 to be paid at the end of twelve months' continual service. On March 16 examinations were held for an x-ray operator and a librarian at Cook County Hospital.

Dr. E. Stillman Bailey, of Chicago, made the startling statement at a recent session of the Southern Homeopathic Medical Association at New Orleans that he discovered a compound to which he gave the name "radio-thor" made from pitchblende found in Colorado and by which locomotor ataxia and similar diseases were quickly cured when it was applied to the backs of the patients. It will be interesting to hear details of the cases that Dr. Bailey has cured by this means.

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#### MEDICAL SOCIETY NOTES.

Dr. J. W. Pettit addressed the Madison County Medical Society March 31.

Dr. Otto T. Freer, of Chicago, addressed the Morgan County Medical Society March 11.

Dr. John Ridlon and Dr. James W. Pettit, president of the Illinois State Medical Society, addressed the Will County Medical Society at Joliet March 9.

At a meeting of the Canton Physicians' Club the following officers were elected for the ensuing year: President, Dr. J. E. Coleman; vice-president, Dr. J. M. Adams; secretary-treasurer, Dr. D. D. Kirby; membership committee, Drs. J. E. Sutton, P. S. Scholes and L. R. Chapin; judiciary committee, Drs. W. T. Zeigler, H. C. Putnam and D. D. Kirby; board of directors, Drs. J. E. Sutton, E. W. Regan, L. R. Chapin, W. T. Zeigler and Martha Richardson.

The following named officers were elected at the last meeting of the Jasper County Medical Society, March 5, 1909: President, Dr. H. A. Eidson; vice-president, Dr. W. E. Franke; secretary-treasurer, Dr. James P. Prestly; board of censors, Drs. S. P. Berns, James F. Davison and E. E. Burton; medicolegal representative, Dr. James P. Prestly; delegate to Illinois State Medical Society, Dr. G. W. McDeed; alternate, Dr. H. A. Edison. The date of meeting has been changed to the first Friday in the months of March, June, September and December, at 1:30 p. m.

The second midyear meeting of the American Academy of Medicine (specializing in medical sociology) was held in the sixth-floor banquet hall, Auditorium, Chicago, March 25, 1909. The meeting constituted a conference with the academic and medical teachers and was open to the public. The program consisted, during the day, of a general discussion on entrance requirement, didactic and laboratory portions of the medical course, the relation of the literary college and the medical college, and the consideration of the elective courses in the medical schools. In the evening the conference discussed the subject of "What Constitutes a Liberal Education in the Twentieth Century?" George E. MacLean, D.D., LL.D., Iowa City, Iowa, president of the State University of Iowa; Thomas McClelland, D.D., Galesburg, Ill., president of Knox College; Charles F. Thwing, D.D., LL.D., Cleveland, Ohio, president of Western Reserve University, were the speakers.

The Physicians' Club of Chicago held a meeting at the Chicago Automobile Club, Thursday evening, March 11. The discussion was on the subjects of "Business Partnerships in the Medical Profession" and "The Question of the Division of Fees." The chairman for the evening was Dr. William T. Belfield and the following subjects and speakers constituted the program: 1. "Advantages and Disadvantages of Office Cooperation and Business Partnerships Among Medical Men," Dr. Casey A. Wood; 2, "The Question of the Division of Fees from the Surgeon's Standpoint," Dr. J. F. Percy, Galesburg, Ill.; 3. "An Equitable Arrangement of Fees from the Physician's Standpoint," Dr. Wm. E. Quine. Discussion opened by Dr. Henry F. Lewis, Dr. Charles L. Mix and Dr. John A. Robison. THE JOURNAL has discussed this subject of fee-splitting in its columns for the past several months and arrangements have been made for the full report of the Physicians' Club meeting, which will be published in our next issue.

The report of the Committee on the Abuse of Medical Charity, Dr. Fischkin, chairman, of the Chicago Medical Society, was made before the Council of that society, March 9. The report is comprehensive and

shows a great amount of investigation work by the committee. It must be of great interest to the general profession of Illinois, and we print that report in full as it appeared in *The Bulletin* of the Chicago Medical Society:

Dr. Fischkin, Chairman:—Your committee, in deliberating upon the course to be taken in finding a solution to the problem of the abuse of medical charities, has agreed upon the following premises:

1.—*Charity Is a Cardinal Virtue of Medicine.*—No matter how heavy the burden of medical charity shall fall upon the medical profession, it is willing to carry the burden, but the medical profession has come to the recognition of evils which have crept into the work of charitable institutions and is bent to remove these evils.

2.—*The Practice of Medicine Is Based Upon the Confidence of the Public.*—Whatever remedies we shall select as best to eradicate these evils, they must find public confidence and approval. Guided by these premises, your committee has tried to disentangle the perplexities which have confronted it in the solution of the abuse of medical charities.

#### THE PROBLEM.

The task of administering medical charities in institutions is made complex and its right accomplishment difficult because it involves various and more or less conflicting interests; the interests of the suffering poor for whom the institutions are primarily established; the interests of charitable organizations which create and manage these institutions and which are or are supposed to be prompted by the sole desire of giving charitable relief to the needy; the interest of the physicians on the attending staffs of these institutions whose benevolent desires are gratified and whose medical experience is enriched and whose reputation is enhanced by this service; the interests of the medical profession at large which is desirous of having places for the treatment of their poor patients, but whose economic rights may be interfered with by an unjust administration; the interests of medical science whose progress is largely due to observation and study in these institutions; the interests of the medical colleges whose work depends upon their existence, and the interests of the general public which is concerned in a just and adequate administration of public charities.

In the study of this complicated situation your committee has found itself naturally and inevitably taking a broad view of its problem. The administration of medical charities is closely involved with other serious evils besides economic abuse, and these evils ought not to be lost sight of in any effort at improvement. Owing to the close relationship between all of the evils and their evident dependence in a large measure upon the one for the eradication of which the committee was established, the study of the whole problem has served but to emphasize the fundamental necessity of correcting economic abuse. The imposition of economically independent persons upon charities, which are intended for the relief of the suffering poor only, involves not merely the impoverishment of the medical practitioners, who are thus deprived of the possibility of rendering remunerative service, but such imposition effects also a moral injury to these fraudulent recipients of charity themselves, and the moral propriety of institutions either permitting or fostering this evil, even though they may be prompted by the charitable intention of increasing by these means the facilities for treatment of the poor, is open to serious question. However we may approach the problem of reform in charity administration, one proposition must, in justice to all concerned, be given weight over all others, namely, the improvement of efficiency in service. And the particular evil which, by increasing the numbers to be treated and by disturbing the confidence of the physicians in the worthiness of their free patients, contributes more than all else toward the present serious inefficiency in the service, is the economic abuse of the free facilities offered. The eradication of this evil is, therefore, the necessary first step toward the general

uplifting of the administration of medical charities to a higher plane of justice, morality and efficiency, and this should be considered the real problem to be undertaken in this movement.

#### THE SOLUTION.

The correction of the fundamental evil of the abuse of medical charities the committee considers possible only by placing the relationship between the different interests participating in the administration of medical charities on a sound and commonly ethical basis, thus displacing the confusion which is now governing them and which is working so injuriously to the medical profession. The difficulty of the problem lies chiefly, as has been said, in the diversity of the different interests concerned, they being actuated by generally benevolent, but conflicting and often antagonistic conceptions. In order to exclude so far as possible the infringement of one interest upon another, it is necessary to establish a common basal principle of conduct applicable to all, that of administering charity for Charity's sake only.

The committee has, therefore, come to the conclusion that the organization of medical charities must rest upon the same principle upon which modern organization of general charity is based, and that is investigation of those to whom charity is administered. It therefore, in the beginning of the fiscal year, had several conferences with the representatives of the organized charities of Chicago, with the object of interesting them in the solution of this most important problem and of placing the solution in their capable hands.

Your committee was prompted to this step by the following considerations:

1. The exercise of charity toward those who best deserve it and the detection of imposters who would be degraded by it is a difficult task which requires a great deal of personal exertion, an expensive investigating force, much time, as well as judgment and tact, not given to all, but which is now developed as a working machinery by the associated organized charities of Chicago.

2. The organized charities of Chicago, representing the moral progress and ethical conscience of the people of this city, are alone in a position to command the respect and to gain the confidence of all parties concerned in the administration of medical charities as well as of the general public.

The representatives of the organized charities have accepted our proposition most sympathetically and have declared themselves ready to take up the new movement, of the reform in medical charities, as their own, with the condition that the entire organized medical profession of Chicago shall stand behind it.

Your committee has, therefore, sought the cooperation of the homeopathic, eclectic and physio-medical societies. At conferences which have repeatedly been carried on between your committee and those organizations and societies, the representatives of the four organizations of charities: (1) The Chicago Bureau of Charities, (2) the Chicago Relief and Aid Society, (3) the Jewish Aid Society of Chicago, and (4) the Children's Relief and Aid Society of Chicago, have declared themselves willing to combine their individual resources into the establishment of a system which would undertake to investigate and pass upon the merits of applicants for medical charity. As a result of this conference the following working plan for inaugurating a system of investigation has been agreed upon.

#### THE PLAN.

The institution (dispensary or hospital) shall receive each applicant for free medical service as if presenting himself in good faith and worthy of charity. Each patient, upon presentation, shall be asked certain definite questions, alike for all institutions, as follows: Name. Address. Sex. Nationality. Married or single. Widowed or separated. Names of children and their ages. The amount received in wages by each member of the family. Number of rooms occupied and rent paid.

All of this will be recorded on a card with proper blank places and of a size suitable for filing. Moreover, each applicant (and this is an important feature



of the plan) is to be told that his case may be investigated. The patient may remain for the first treatment. These cards, duplicates of which shall be kept in the institution, shall each day be sent by mail to the office of the Bureau of Investigation, to be formed by the above-mentioned charitable organizations. After a brief time, two days or perhaps more, the report from the bureau will come back, including a statement concerning the fitness of each applicant for free service. The institution shall accept this judgment as final, unless upon mutual reconsideration the Investigating Bureau alters its judgment.

The Investigating Bureau, having at its disposal the records of tens of thousands of cases on file by the organizations above mentioned and other charitable organizations that use investigation and registration (the county agent has also promised his cooperation), will compare these records with the information on the card received from the dispensary or hospital and, if necessary, investigate the case at the homes of the patients, after which judgment as to fitness of the applicant for free service will be formed and this information returned to the inquiring institution.

Emergency operations shall be performed at once, if necessary. Operations of election shall not be performed before the bureau has returned its report.

#### THE APPLICATION OF THE PLAN.

At the outset there necessarily must be much uncertainty as to the size of the task of investigation. While the charity organizations are entirely ready to employ the facilities they possess and are willing to enlarge them in so far as is possible, yet they, in the nature of things, can not promise that their facilities will be sufficient. In other words, they can enter at present into no fixed agreement to handle an indefinite amount of this work. They stand ready merely to do their best with their present facilities. Investigation at the patient's homes would at present be carried on only in selected cases, left to the discretion of the Investigating Bureau. In the busy winter season they might find that the increased demand from their regular work would compel even this partial degree of medical charity service to be slurred over. They estimate, however, that an annual increase in their present resources for this purpose of from six to eight thousand dollars would place this whole matter upon a sound and reliable basis, such that every applicant for medical charity could be adequately investigated. Eventually it is believed this annual sum could be obtained from the public.

It is the belief of the organized charities that the application of this plan of investigation, even in its preliminary, imperfect and limited form, will serve to eliminate a very large percentage of the abuse; the very fact of the applicant being told that his case may be investigated will keep imposters away to a great extent. And eventually, with the enlargement of the machinery of investigation, with the education of the public and the profession and with the organized efforts of physicians administering medical charities, the ideal plan of universal investigation could be put into operation.

Your committee believes that the system of investigation as offered by the organized charities should be first applied to dispensaries. It will be the function of your committee to resume the work of last year's committee toward organizing the free dispensaries into a federation or association with the purpose of accepting the system of investigation of the organized charities.

In regard to hospitals, however, your committee believes that an immediate application of the plan would be unwise and even impossible, inasmuch as the condition of treatment as well as the character of the applicants for free service and their places of residence widely differ from the applicants at the free dispensaries, and while the conditions of free medical treatment in dispensaries have been investigated the exact conditions in hospitals are not as yet understood. Your committee is, therefore, taking steps to start an investigation to that effect and is of the opinion that before this investigation has been concluded no attempt should be made to apply the system to hospitals.

## THE ENFORCEMENT OF THE PLAN.

Your committee is aware of the difficulties which will stand in the way of introducing the new method of administration of medical charities. Physicians and lay administrators of charitable institutions may be inclined to hold on to what seems to them a present advantage, and the refusal or lukewarmness of a few institutions is likely to defeat the whole plan, because institutions will hesitate to relinquish an advantage unless all do likewise.

To overcome these difficulties we have at our disposal the following means: (a) Education and appeal, in order to cause physicians and lay administrators to see the advantage and desirability from every standpoint of elevating the standards of medical charity administration. (b) The full moral influence of a united profession brought to bear upon institutional physicians. (c) The exercising of punitive measures available to medical societies, namely, censure, suspension or expulsion from membership.

The wisdom of exciting widespread antagonism by harsh attempts at compulsion is open to question. It is the belief of your committee that the effectiveness of professional rules lies less in a sense of compulsion than in a sense of their innate right and justice and in the formation of a habit of acquiescence in the common purpose. In a matter involving a thousand physicians and as many laymen and a hundred and more institutions, under conditions where conduct is easily concealed, it would seem that loyal enforcement of a plan of investigation must, in the nature of things, depend upon a practically universal individual respect for the system to be enforced; also the full justice of attempting immediate drastic, unitive measures to undo evils, which have, for the most part, been an innocent sociological growth, acquiesced in, if not approved by all, may be questioned, for we can not punish for ethical misconduct, before the ways of ethical conduct are clearly marked out. And yet the value of society action must not be underestimated and must in the long run be exercised. Your committee, therefore, submits the following preamble and resolutions to the Council and recommends their adoption:

## RESOLUTIONS.

WHEREAS, Present conditions concerning the administration of medical charities in Chicago are fully known to be intolerably crowded with injustice to the physicians of the city:

WHEREAS, Said conditions seriously tend to encourage fraud and dependence in very many of those who seek the aid of medical charity;

WHEREAS, By overcrowding free-treatment institutions and by destroying the confidence of physicians in the worthiness for free service of their institutional patients, present conditions are largely responsible for the careless and inadequate treatment now to a serious extent prevailing;

WHEREAS, It has become imperative, in order to protect the interests of the public, the sick poor and the physicians, to place the administration of medical charities upon a higher plane of justice and efficiency; therefore, be it

*Resolved*, By the Council of the Chicago Medical Society, that the plan of cooperating with the Chicago Bureau of Charities, the Chicago Relief and Aid Society and other charity organizations to establish a Bureau of Investigations and a system of inquiry as to the worthiness of the applicants for free medical treatment in dispensaries and hospitals, shall be adopted and that the Committee on Abuse of Medical Charities be authorized to make formal application to the respective boards of these organizations.

*Resolved*, That the Chicago Medical Society shall cooperate with the Chicago Homeopathic Society, the Chicago Eclectic Society and the Chicago Physio-Medical Society for the purpose of working out the details of the plan of investigation with the Chicago Bureau of Charities and the Chicago Relief and Aid Society, and that the Committee on the Abuse of Medical Charities be authorized to undertake such cooperation.

*Resolved*, That the Chicago Medical Society shall unite with the Chicago Homeopathic Society, the Chicago Eclectic Society and the Chicago Physio-Med-

ical Society and the Chicago Bureau of Charities and the Chicago Relief and Aid Society in inviting all the reputable free dispensaries of the city to cooperate in the establishment of an adequate system of investigation of applicants for free treatment and to the elevation of the standards of management and treatment of the sick poor in the dispensaries of the city, and that the Committee on the Abuse of Medical Charities be authorized to undertake such cooperation.

*Resolved*, That the Chicago Medical Society unite with the Chicago Homeopathic Society, the Chicago Eclectic Society, the Chicago Physio-Medical Society and the Chicago Bureau of Charities and the Chicago Relief and Aid Society in the investigation of charity administration in the Chicago hospitals, and to this end, and in union with the above-mentioned organizations, the various hospitals and members of hospital staffs be requested to furnish the needed information.

*Resolved*, That the following proposition shall be submitted to a referendum vote of the full membership of the Chicago Medical Society at the annual election of officers in June, 1909, each proposition to be voted on separately:

1. The Chicago Medical Society hereby declares, through this general referendum vote, its future fixed purpose concerning institutional medical charity, namely, that every patient treated by members of the Chicago Medical Society in free institutions shall undergo an investigation as to his or her economic right to free service, in accordance with plans for the investigation to be determined upon by the Council of the Chicago Medical Society in conjunction with the other medical societies and the charitable organizations of the city.

2. With the establishment of such a system of investigation it shall be a matter of society ethics for all members of the society serving on the staffs in charitable medical institutions to conform with and to enforce the established system of investigation in their institutions.

3. The raising of money annually needed for the purpose of placing and maintaining the system of investigation upon a firm and reliable foundation by subscription both from the general public, from the members of the society and from the physicians non-members is hereby authorized, and the members of the society pledge themselves individually to a full financial support of this enterprise. It is, however, considered that the burden of the expense ought eventually to be entirely assumed by the general public.

*Be it further Resolved*, That a committee of three be appointed by the President to superintend the referendum vote provided for in the preceding portion of these resolutions.

*Resolved*, That the pages of the *Bulletin* be thrown open until the time of the referendum vote to the discussion of the matters to be voted on, subject to the editorship of the Secretary and one additional member of the society appointed by the President.

*Resolved*, That the *Bulletin* containing this subject be distributed at the expense of the society to physicians of the county not members of the Chicago Medical Society.

*Resolved*, That at least one meeting of the general society and more than one if the President and Secretary of the society deem it advisable, shall be devoted to this subject between the present time and the date of the referendum election.

*Resolved*, That the Council request every adjunct and affiliated society to arrange discussions of this subject at one or more regular or special meetings previous to the date of the annual election.

E. H. OCHSNER,	BERTHA VAN HOUSEN,
S. J. McNEILL,	THOMAS FAITH,
J. B. LORING,	F. B. EARLE,
E. L. KENYON,	J. M. DODSON,
E. A. FISCHKIN,	Chairman.

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## PUBLIC HEALTH.

Smallpox has been reported at Blend.

Smallpox is reported at Gillespie, Ill.

Scarlet fever is still epidemic in Aurora.

Smallpox has been reported in Austin, Ill.

A smallpox epidemic is reported at Norris, Ill.

Chickenpox has been reported at Bennington, Ill.

Measles has been reported as epidemic at Moline.

Schools have been ordered closed at Sullivan on account of an epidemic of scarlet fever.

The last case of smallpox has been taken out of quarantine at Canton. During the epidemic 52 cases were placed under quarantine.

As a result of the crusade started again in Chicago by the health commissioner and the chief of police against men who spit on sidewalks, in street cars and elevated trains, five violators of the ordinance were each fined \$1 and costs February 17.

Health Commissioner of Evans, of Chicago, has ordered placards placed in every house where there is diphtheria, typhoid fever, scarlet fever, or other infectious disease and as many other homes as possible, giving concise and plain hygienic instructions in cases of communicable diseases.

As a result of a conference which took place February 25 between the health commissioner of Chicago and the city council, it is hoped that the appropriation of \$636,102 asked for the health department will be saved intact. The health commissioner called attention to the fact that, although the council last year appropriated \$835,204 for this purpose, the department had spent only \$606,410.

The Illinois commission to inquire into the condition of the blind will report to the legislature the following bills: To prevent ophthalmia neonatorum; to enlarge the State School for the Blind, Jacksonville; to rejuvenate the Illinois Industrial Home for the Blind, Chicago; to care for the aged blind; to create a state commission for the blind, and to appropriate \$1,000 for a state census of the blind.

Dr. J. C. Westervelt, of Springfield, a member of the State Board of Health, was in Hardin last week investigating the numerous cases of scarlet fever. He says there are over 70 cases reported, and when the disease first made its appearance it was in a very mild form and people paid no attention to it, but as it gained headway it became more virulent. Many towns have been quarantined against Hardin.

The legislature, on March 10, passed the Glackin bill by a vote of 140 to 2. The bill authorizes cities and villages to levy a special tax of one mill to construct and maintain public tuberculosis sanatoria. The prime object of this bill is to secure for Chicago a sanatorium for tuberculosis, as the mill tax will amount to about \$160,000 a year. The question of the issue of bonds will be submitted to voters at the coming election and will undoubtedly meet with approval and result in this good work being undertaken.

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#### CHANGE IN LOCATION.

Dr. C. E. Frogg, of Toluca, has returned to Wenona, Ill.

Dr. J. W. Evans has removed from Toluca to Varna, Ill.

Dr. A. L. Lafferty, of Elmore, has located at La Rose, Ill.



Dr. J. J. Toalson has removed from Peoria to Danville, Ill.

Dr. Benjamin M. Forrest has removed from Peoria to Henry, Ill.

Dr. B. F. Stults has removed from New Holland to Mowequa, Ill.

Dr. Albert W. Bradford has removed from Sparland to Lacon, Ill.

Dr. G. M. Tyrrall has removed from Elizabeth to Scales Mound, Ill.

Dr. J. Wilson Ramsey has removed from Memphis, Tenn., to Aledo, Ill.

Dr. M. L. Huntington has removed from Moline, Ill., to Platteville, Wis.

Dr. T. C. Kimball has removed from Abingdon, Ill., to Carbondale, Kans.

Dr. E. S. Everett has removed from Amboy, Ill., to North Attleboro, Mass.

Dr. W. Purviance has removed from Granite City, Ill., to Panhandle, Texas.

Dr. F. P. Zerfass has removed from Sullivan, Ill., to Oxford, Ohio, Retreat Sanitarium.

Dr. J. C. McEnery has removed from Jacksonville, Ill., to 111 Wabash Avenue, Kansas City, Mo.

Dr. W. E. Scarborough has removed from Shelbyville, Ill., to Medicine Block, St. Paul, Minn.

Dr. O. B. Lamhert has changed his address from 1957 Deming Place to 2358 Indiana Avenue, Chicago.

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### NEW INCORPORATIONS.

Paul Brothers Medicine Company; location, Belfast, Me.; location in Illinois, Alton; capital, \$300,000; capital in Illinois, \$300,000.

Bethwill Sanitarium, of Dixon, Ill.; maintain private hospital; incorporators, William A. Herrick, Melissa A. Herrick and Oscar E. Eicholtz.

Dr. Sanders Institute, Chicago; capital, \$2,500; to operate a dermatological institute; incorporators, Hyman J. Rosenberg, M. Goltra, A. C. Wellington.

H. Rosenberg Company, Chicago; capital, \$2,500; manufacture and sell drugs and medicines; incorporators, Carl P. Fries, Louis Brandes and Samuel Brandes.

Chicago School of Nursing, Chicago; capital, \$10,000; to organize and conduct schools; incorporators, Orville J. Perkins, William H. MacCullough and Arthur G. McKinley.

Illinois Aid and Cooperative Company, Chicago; capital, \$2,500; operate drug stores and provide physicians' services, etc.; incorporators, Samuel C. Frye, George W. Henderson and Lawrence Knight.

New Medicine Publishing Company, La Grange; capital, \$2,000; general publishing business, also manufacturing and dealing in surgical instruments; incorporators, Peter L. Evans, Henry D. Cheney and George C. Holmes.

## MARRIAGES.

JOHN ADAM KAPPELMAN, M.D., of Evanston, to Miss Jennie Hanson, of Oak Park, Ill., March 18.

AUGUST SAUTHOFF, M.D., of Madison, Wis., to Dr. Mary Blakelidge, of La Grange, Ill., on Jan. 20, 1909.

ALBERT WILLIAM BRADFORD, M.D., of Sparland, Ill., to Miss Lucy Smith, of La Prairie, Ill., January 31.

## DEATHS.

HARRY CLIFFORD SECRIST, M.D. Miami Medical College, Cincinnati, 1881; died in his apartment in Moline, Ill., February 4, aged 58.

SHELDON J. BASSETT (years of practice, Illinois, 1878) died at his home in St. Elmo, Ill., February 5, aged 71.

HUGO SCHAEFFER, M.D. University of Tübingen, Germany, 1865; died suddenly from heart disease at his home in Belleville, Ill., February 22.

HASKEL R. WOOD, M.D. Eclectic Medical Institute, Cincinnati, 1872; died at his home in Galesburg, Ill., February 25, from cerebral hemorrhage, aged 76.

CHARLES D. ABBEY, M.D. College of Physicians and Surgeons, Chicago, 1890; a member of the Illinois State Medical Society; died at his home in Chicago, February 21, from cardiac dropsy, aged 61.

JOSEPH McD. LAWRENCE, M.D. Missouri Medical College, St. Louis, 1888; of Willard, Ill.; died in St. Mary's Infirmary, Cairo, Ill., March 7, ten days after an operation for the removal of gallstones, aged 51.

IMMON SEEGER LOWELL, M.D. Albany (N. Y.) Medical College, 1871; of Douglas, Ill.; a member of the American Medical Association; died in Galesburg, Ill., Nov. 19, 1908, from prostatic abscess, aged 66.

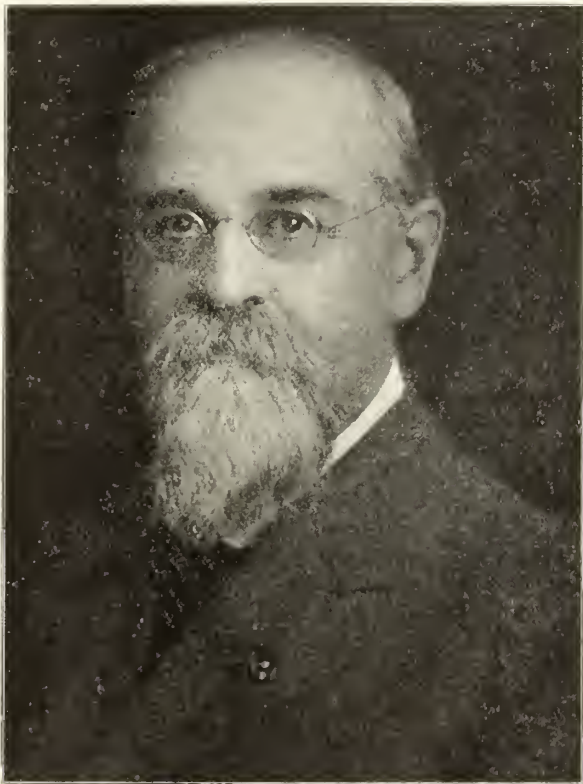
JENNETTE WINDIATE HOLLISTER, wife of Dr. John H. Hollister, aged 81 years and 10 months, died, February 14, at the home of her daughter, Mrs. Franklin H. Martin, 3210 Lake Park Avenue, Chicago.

JOSEPH S. MAXON, M.D. Hahnemann Medical College, Chicago, 1875; Chicago Homeopathic Medical College, 1879; a member of the Wisconsin legislature in 1890 and 1891; coroner of McHenry County, Illinois; died at his home in Harvard, February 28, from influenza, aged 70.

J. H. BROOKS, M.D., a former superintendent of the Northern Insane Hospital, died at Dixon, Ill., recently, of apoplexy, aged 58. Dr. Brooks lectured extensively throughout the country on insanity. While he was in office from 1890 to 1893 the annex to the hospital for incurable insane was built and much was done to improve the living conditions of the patients.

DANIEL R. BROWER, M.D., Georgetown University, Washington, D. C., 1864; dean of the neurologists of Chicago; died at his home in that city, March 1, from cerebral hemorrhage, aged 69. He was born in Philadelphia and graduated from the Philadelphia Polytechnic College

in 1860 with the degree of M.S.; he served in the army as assistant surgeon of volunteers two years during the Civil War, and afterwards as superintendent of the Freedman Hospital, Richmond, Va., and later of the Virginia Eastern State Hospital for the Insane, Williamsburg, for nine years. He came to Illinois in 1875 and settled in Chicago, and soon became an important figure in the medical life of the city. He was for many years connected with Rush Medical College, first as professor of materia medica and therapeutics, and later as professor of nervous and mental diseases, also held for many years the chair of diseases



of the nervous system in the Northwestern University Woman's Medical School and the Chicago Postgraduate Medical College.

He was a member of the American Medical Association, Illinois State Medical Society, Chicago Medical Society, American Neurological Association, American Electro-Therapeutic Association, National Association for the Study of Epilepsy, Mississippi Valley Medical Association and Chicago Physicians' Club, the American Medico-Psychological Association, an honorary member of the Moscow Society of Neurologists and Psychiatrists and one of the founders of the Senn Club, and has been several times a delegate to international medical congresses. He was a member of the attending staff of St. Joseph's, Cook County and

Presbyterian hospitals and consulting physician to the Women's and Children's Hospital and Oakwood Sanitarium. He was the author of a standard text-book on insanity and of many monographs on nervous and mental diseases. He was given the honorary degree of A.M. by the Wabash College and that of LL.D. by Georgetown University, Kenyon College and St. Ignatius College.

He was in apparent good health until a week before his death, when he was seized with hemiplegia, causing paralysis on the left side, but apparently not affecting his mentality. He gradually failed physically, but retained consciousness until a few hours before his death, which occurred at 3:30 a. m. Monday, March 1.

Dr. Brower was one of the most beloved medical men of Chicago. He always had kind words and help for the younger members of the profession, was an able consultant, and, in spite of advancing years, kept thoroughly in touch with the latest ideas in his most complex of specialties. He was a constant worker for the public good, and to his efforts have been due many of the reforms instituted in the care of the dependent insane charges of the state. One of the last public services he performed was as a member of the non-partisan committee appointed to investigate conditions in the penal and charitable institutions in the state.

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## Book Notices.

A TEXT-BOOK OF MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By George F. Butler, M.D., Professor and Head of the Department of Therapeutics and Professor of Preventive and Clinical Medicine, Chicago College of Medicine and Surgery, Medical Department of Valparaiso University. Sixth Edition, Revised and Enlarged. Octavo of 708 Pages. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$4.00 net; Half Morocco, \$5.50 net.

That ten revisions or reprints of Dr. Butler's work on Materia Medica have been called for in the past twelve years is the best possible evidence of the popularity of this book and proof that it fills a want of the student and practitioner of medicine. The present edition has been thoroughly revised, enlarged and adapted to the 1905 revision of the United States Pharmacopeia. Dr. Butler might be charged with being a therapeutic enthusiast, but on the whole a therapeutic enthusiast is more to be admired than a therapeutic annihilist.

A TEXT-BOOK OF MEDICAL CHEMISTRY AND TOXICOLOGY. By James W. Holland, M.D., Professor of Medical Chemistry and Toxicology, Philadelphia. Second Revised Edition, Octavo of 655 Pages, Fully Illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$3.00 net.

Dr. Holland's Medical Chemistry and Toxicology is exactly what it purports to be—a text-book showing the remarkable developments of physical science in recent years which have furnished the practical sciences with working principles of great value, which are being applied successfully to biologic problems in bacteriology and pharmacodynamics. Cryoscopy, osmotic pressure, electrolytic dissociation, mass-action, radioactivity, have not been recognized hitherto as part of the preparatory studies, and hence should find a place in the medical text-book to the extent at least of a compendious statement of the principles involved. All that has been included within the scope of this work is little more than a foundation for those who choose to build upon it hereafter. This must be a growing class, for there is great hope of medical progress in this direction.



# ILLINOIS MEDICAL JOURNAL

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No. 5

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## ORIGINAL ARTICLES

### Symposium on Psychotherapy\*

#### PSYCHOTHERAPY.

SYDNEY KUH, M.D.

Associate Professor of Neurology, Rush Medical College.

CHICAGO.

Our influence upon the patient's mind begins with the moment when the sufferer enters our office. The appearance of that room, of the medical apparatus that it contains, the physician's personality, are the first factors which often determine whether or not his confidence, so essential for success, can be obtained. The value of these points have long been recognized by the quack, whose workshop is often filled with things that suggest his success with others, with instruments and apparatus which look impressive and arouse the hopes of him who seeks for health. While some of the methods employed by our disreputable colleagues will necessarily be rejected by him who values his reputation, still the principle is one which should not be ignored. It is above all the physician's method of dealing with his client that is of paramount importance. The neurotic individual, and he is the one in whose treatment psychotherapy is most often and most successfully employed, is usually a keen observer. He watches with the greatest of interest our examination, notes whether this or that organ has been overlooked, whether the investigation is made in a careful, painstaking or in a slovenly manner. Next to the physician's personality I should value the influence of the first examination most highly. It must indicate to the patient that his doctor takes a genuine interest in his case, that he really considers him ill; it must, on the other hand, carefully avoid anything

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\* Read at the joint meeting of the Chicago Medical and Chicago Neurological Societies, Feb. 10, 1909.

that the patient might misconstrue into the belief that a very grave, a fatal illness has been discovered; it must prove to him that he has his physician's sympathy, but not his pity. If at the end of the examination he will acknowledge that never had he been examined as thoroughly before, much is gained. It is here that we usually first meet with a difficulty, which confronts us at almost every step in psychotherapy, a difficulty which is greatest now, when we know least about the patient's personality, the difficulty of adjusting every move to his individuality. While a hasty and careless exploration at once deprives us of the patient's confidence, one that is too prolonged, too searching, is sometimes a potent factor in confirming the patient's dread of a serious illness; in even producing by suggestion new symptoms. That this latter danger is a very real one, especially in hysteria, every neurologist has experienced time and again. A case illustrating this point in a very instructive manner came under my observation some years ago. A woman of neurotic temperament consulted her family physician on account of a persistent inability to retain food. He made the diagnosis of carcinoma of the stomach, but refrained from telling the patient of his suspicion. His grave demeanor and the advice that a surgeon be called in consultation, however, was enough for the very intelligent victim of his mistake. Before the consultant arrived upon the scene, the harm had been done, and his assurance that the trouble was purely nervous could do little to counteract the baneful influence of an unfortunate suggestion. When she came into my hands, the mere fact that I agreed with the surgeon on what was to the patient an impossible diagnosis made the case one of the most difficult and tedious ones of hysteria which it ever had been my fate to care for.

We must, then, listen to the patient's story—often all too long and tedious—with at least the appearance of interest, and be equally careful to avoid anything that might suggest that we consider the case a trifling one, and, on the other hand, anything that might frighten the patient into the belief that the malady is more grave than it really is. While it is absolutely necessary that at the time of this first examination the patient be permitted to tell the whole story, frequent repetitions of this recital are to be prohibited, for they merely tend to confirm the morbid autosuggestions. To tell a neurasthenic or an hysteric that there is nothing wrong with him, that his troubles are purely imaginary, is both untrue and harmful. For what symptoms there may be which are purely psychic in origin, they do not constitute an imaginary disease, but are rather the result of a diseased imagination.

After our examination has been completed, we will, as a rule, be asked to tell the patient whether or not we will be able to cure him. Here the mistake is very commonly made to promise too much. It is very rarely a safe thing to state that one treatment or a short course will result in a cure, but, better, to be satisfied with the assurance that the ultimate outcome will be satisfactory, though it is impossible to predict just how long it will take. There is only one thing about which we may be and should be positive in our assurance. "You will get well."

If we promise too much, we will often be unable to keep our word, and that means that the most essential factor in the entire treatment, the patient's confidence, is gone. If there be any exception to this rule at all, we may find it in children, and the very ignorant amongst the adults, for these are most suggestible, hence most liable to find prompt relief. Some physicians are found who inform their hysterical patients that they suffer from this neurosis. That, I believe, is always a mistake. It may, however, be permissible in carefully selected cases to tell them that their illness is mental in origin, the result of morbid willing and thinking. I have found it advisable, however, always to wait with such an explanation until I felt sure of the patient's full confidence, and then to make it of such a kind that he would understand me without difficulty—clear and simple, not metaphysical and involved. To inundate such patients with a flood of unintelligible technical terms may perhaps in rare instances awe them, more often it will surely simply disgust them.

If the case is one which is at all grave or difficult, frequent consultations are absolutely essential, for a suggestion, to have the desired effect, must often be repeated again and again. During the earlier visits the physician should try to learn all he can about his patient's habits, tendencies, likes and dislikes, for a thorough knowledge of all these will be of great value to him. He should constantly be on the watch for some remark made by the patient which he can utilize for the purposes of suggestion, some slight change, noted by the sufferer himself, which can be interpreted as the first evidence of improvement. This little stragem has often proved of great value to me. During these earlier days of the treatment it is well to "keep one's eyes open and one's mouth shut," as one of our colleagues put it, to observe carefully, but to avoid any statement which might later on prove ill advised.

When we finally feel that we know our patient thoroughly, then we must devise some plan of treatment, depending altogether upon the individuality of him whom we would cure. And here it is impossible to do more than to mention a few of the available methods. Which one is to be used must be decided in each special instance. There is a certain change of fashion in these things which is not without justification. It is the mysterious, the new, that is most liable to impress the sick, and so we have seen electricity, hydrotherapy, metallotherapy, vibration, the treatment with magnets and solenoids, and a host of similar methods come into use and disappear more or less completely from the horizon. To-day the rest cure, on the one hand, and the work cure, on the other, the latter the very latest thing in psychotherapy, have many enthusiastic advocates. Whatever you may ask your patient to do, whatever method of treatment you suggest to him, be sure that your demands remain within the range of what is possible for him, and then insist absolutely upon them. Frequent changes, polypraxy and polypharmacy, should be avoided.

Our best results in psychotherapy we undoubtedly obtain when the patient is transplanted into new surroundings; for most of the more serious and tedious cases such a step is absolutely necessary. Even the

nurse should not, as a rule, accompany the patient from his home to the sanitarium. Here begins a process of re-education, a process which again must in every instance be adapted to the individuality, and for which no hard and fast rules can be laid down. An intelligent nurse, one who supports the physician understandingly in his efforts, who strengthens the patient's confidence, who diverts his mind from his troubles and pains and aches into more pleasant channels, is a *sine qua non* of success. For such patients as are anemic, emaciated, poorly nourished, as suffer from anorexia, hypochondriasis, the various phobias, a rest cure is often the best thing; others may do better if sent to the country, to the mountains, where they receive new impressions, where an occupation may be found which keeps them busy, without making great demands in the way of intellectual labor. Again, others will progress most rapidly toward recovery in an institution adapted for the so-called work cure, a place where carefully regulated manual labor is prescribed according to the needs of the case.

The books which the patient is permitted to read, if, indeed, it seems advisable to have him read at all, must be selected with the greatest of care. The sensational, morbid modern novel should be rigidly excluded, as must be all stories which might tend to excite the sexual appetite. The humorists are most suitable for these cases; Cervantes, Dickens, Mark Twain, Fritz Reuter will never do any harm, and often be of decided benefit. It is not altogether a joke when one of our colleagues claims that he has had excellent results in cases of anorexia from prescribing the "Lure of the Labrador Wilds." Nansen's "Farthest North" has made some very hot summer evenings quite tolerable for me; the vivid descriptions of ice fields and icebergs having an effect not dissimilar to that of a cooling fountain. Medical literature will, as a rule, produce nothing but harm. Even Dubois' book seems to me of at least very doubtful benefit. Newspapers, if they are allowed, should be carefully censored. It is perhaps best, if the patient must have them, to instruct the nurse to read only selected paragraphs, carefully avoiding the reports of murders, suicide and all such matters as might tend to excite her charge. Of other diversions, drawing, painting, photography, music and similar amusements may be permitted or even ordered in suitable cases.

To him who expected detailed instructions as to the methods used in psychotherapy this brief review must necessarily be disappointing, but in the few minutes available for this paper it is utterly impossible to give more than a very few suggestions as to general principles. The rest is a matter of tact, of knowledge of human nature, of careful individualizing, all things with which some of us are endowed, which others acquire laboriously, while some of us, it appears, never learn them. Two recent methods, however, can not be passed by without at least a few words of comment. I refer to Dubois' re-education and persuasion and Freud's method of psychoanalysis. The former is not much more than an elaboration of what many of us had practiced for years, while the latter, which seeks to raise the sexual element, supposedly the cause of all



hysterical troubles, from the subconscious to the level of the conscious, is, in my opinion, based upon an untenable theory. Both methods have given excellent results in the hands of their originators, which proves little, excepting that these men are skilful in the use of suggestive therapeutics. Both will undoubtedly prove successful in the hands of others when used in suitable cases, because they are new, if for no other reason. He who would limit himself to any one method of psychotherapy will always be making the serious mistake of treating the disease rather than the patient.

The therapeutic agent under discussion is, of course, most useful in such functional neuroses as hysteria, neurasthenia and psychasthenia. But its usefulness is not limited to such troubles. All of us make use of psychotherapy constantly, often utterly unconsciously, as a palliative in all manner of organic diseases. To instill hope into the breast of the despairing, to arouse him, who has given up the struggle, to fight anew, are things that are well worth doing, even in organic and incurable diseases. We may smile when we read of the claim that tuberculosis was cured by hypnotism, and still there is an element of truth in the claim. The fact that a patient, who considered himself lost, begins to believe that he is to be well, may well aid him in recovering his health. Psychotherapy, then, is of the greatest value to all of us, whether we be neurologists or general practitioners, or surgeons, or practice any of the other medical specialties. That we have not recognized its importance has driven a host of sufferers into the hands of laymen, who were willing and more or less capable to make use of a method, perfectly legitimate in itself, but upon which the medical profession frowned. In place of abusing those who are ready to do what we ourselves should have done long ago, let us make use of the powerful weapon at our command, and the cause for complaint will disappear. Let us wake up!

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## PSYCHOTHERAPY FROM THE PSYCHOLOGIST'S POINT OF VIEW.

(Abstract.)

PROFESSOR JAMES R. ANGELL.

University of Chicago.

CHICAGO.

As to the connection of mind and body, I have been amazed in reading medical books and in hearing medical men speak to see how widely the view still obtains that the same sorts of mental processes do not have corresponding brain processes. As to whether some sorts of mental conditions, undoubtedly independent, are going on in the nervous system, I am not in a position to demonstrate conclusively that is not true, but I am in a position to say that is not the common view of any modern psychologist, who believes that mental processes of all kinds that have

physiological counterparts have some sort of corresponding process in the brain, and when we talk about therapeutic methods of treating diseases through the mind it does not mean that we are not producing any change in the nervous system; it simply means we are producing changes in the nervous system by initiating changes in what we call the mind; and, as a matter of fact, when we come to conclusions and see what we have done we have said something, done something, or brought something to pass which affects the sense-organs of the person with whom we are dealing, and that process inevitably affects the brain. We are in such cases dealing with nothing which excludes the action of the brain or nervous processes. Our whole attitude is, without exception, that mental processes have their corresponding brain processes, point for point, and if we are not able to point them out at any particular time it is in consequence of our ignorance and not because the facts are lacking to substantiate it.

So far as I know, the psychologists connected with universities are, for the most part, fundamentally opposed to anything which might be called mysticism in reference to this movement. I think a good deal of the antagonism we have had so far toward certain phases of this psychotherapeutic movement has been based on the fact that there has been an element of mysticism injected into it. As psychologists we have absolutely no sympathy with that course. The temperament of our minds is scientific.

I take it there are three distinct kinds of practice represented in this movement. First, I should recognize that which is being carried on by physicians, neurologists, medical men; second, that which is being carried on by ministers or laymen in conjunction with physicians, and under their guidance; and, third, I should distinguish that practice which is being carried on by persons who absolutely reject all reference to medical guidance, and I include in that class the Christian Scientists and the mind cures of various sorts in one form or another. These represent three distinct groups, and all of them, in some measure, use the same methods, but not with the same intelligence, and not with the same people.

From the beginning of time every physician has made more or less use of psychotherapeutic methods, in that they have brought and are bringing to the sickroom a hopeful personality, cheerfulness and an attitude of encouragement to the patient. For the use of psychotherapeutic methods by medical men I have nothing but the deepest respect and the deepest confidence in the outcome of such methods. It is from medical men we must expect real advancement and information of what has been and can be done in this direction. As to the ministers or laymen who are working under medical control, individuals represented by the movement Dr. Coriat has described, our attitude toward them is essentially this: We feel there is a large group of individuals in the community who are, to all intents and purposes, mentally abnormal, who need help, and who, in the first place, are not likely to go to a physician to get that help, because their troubles are perhaps moral rather than physical.

If they should consult a physician, they are not likely to get from the average physician what they really need, and I can not but believe that there is a genuine and distinctly wide range of usefulness represented by ministers who are well trained for their duties in this particular direction, and I think it is problematical whether the medical practitioner can really fill the bill, and whether he will wish to try to, or whether he ought to try to. I believe there is a real usefulness for those men there that it behooves us to recognize. When we pass beyond that type, it becomes very problematical in the minds of both of us whether ministers are able to conduct, even under medical guidance, the treatment of diseases which are fundamentally of medical type, which are neither primarily moral nor religious, and in which there is much chance consequently of doing serious injury.

Professor Angell concluded his remarks by making a forcible appeal for the introduction into the training of the average medical man a larger measure of psychological work than has heretofore been the custom. In brief, he said: The better medical colleges are already recognizing the wisdom of this, and are providing for the giving of instruction in psychological scientific work to the students as a part of the regular curriculum of medical schools. I welcome that with the utmost enthusiasm and cordiality. At the present time, however, the average psychological department does not offer to the medical school exactly what it ought to have, because we have not been forming our courses to meet that particular need, and it will require some adjustment in almost all our institutions to make that situation as it ought to be. We have a large amount of material to put at the disposal of medical men of fundamental value to them, which will result in turning out into the community of men trained in a far more intelligent way to deal with the mental aspects of disease than the medical schools in the past have been able to do. The average practitioner has obtained what knowledge he has of this kind either by personal experience or by working in the office of a neurologist, and the acquirement of this knowledge has been rather accidental than an essential and radical part of medical training.

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## THE RELIGIOUS THERAPEUTIC MOVEMENT.

ISADOR H. CORIAT, M.D.

BOSTON, MASS.

Probably there has been no movement in contemporary medicine that has attracted more attention and more criticism than the so-called movement taken up by the Emmanuel Church in Boston, a movement which has been called the Emmanuel movement. Why, I do not know, because what the Emmanuel Church has attempted is the establishment of a psychotherapeutic clinic for the treatment of a limited type of functional nervous disorders under rigid medical control. Psychothera-

peutics is a method of psychoanalysis and psychosynthesis, if we may use both terms, and suggestion, by whatever method that suggestion may be applied, is merely a device to synthesize associated mental states and to analyze those states. Therefore, psychotherapeutics is synonymous with suggestive therapeutics. The action of the mind on the body is well known to all medical men, and recently in Russia, under the leadership of the physiologist, Pavloff, methods of action of mind on the body have been applied to the lower animals. For instance, he will take a dog, whose esophagus has been opened in the neck, and in which a gastric fistula has been made, and give that dog some meat to swallow. Of course, the meat comes out from the esophageal fistula and never reaches the stomach. Immediately there is the secretion of gastric juice. He gives the dog pebbles to swallow, and there is no secretion of gastric juice. To my mind, experiments like that speak more than anything for the action of the mind on certain bodily functions.

Medicine, it appears to me, is not limited any more to the dispensing of drugs, to the application of electricity, or to any of the various methods, but medical men have broadened out and are in touch with every human activity. We know from the work of the Massachusetts General Hospital how remarkable have been the results in the so-called social service department, where patients are recommended by physicians in whom there seems to be nothing particularly wrong, yet seem to be out of harmony, dissatisfied with their surroundings. The social worker takes those patients and modifies their surroundings, with the consequence of cure or alleviation of the condition. In 1906 Dr. Worcester and Dr. McComb started what has since become known as the Emmanuel movement; but unfortunately it has spread in every direction. Sometimes, I might say, it has spread into incompetent hands. Of course, they are not responsible for what others are doing outside of their work. They are only responsible for their own work. Dr. McComb is a psychologist, and Dr. Worcester is a doctor of philosophy and professor of psychology, well equipped for the psychological treatment of certain nervous disorders. Patients are treated individually. There is no class treatment. Small numbers at a time are taken. They are only treated after they pledge themselves to remain for a number of weeks at a time. The work is under absolute medical control. About 50 per cent. of the patients are sent directly by physicians, with notes, and these physicians suggest in these notes that there is nothing organically wrong, and they believe the patient or patients will be proper subjects for psychic treatment. The other 50 per cent. of the patients are examined on certain clinic days, and only those patients are accepted who are proper subjects for psychic treatment. Organic cases are never accepted, or cases in which an organic complication predominates over the functional condition. Of all patients that apply to the Emmanuel clinic, about 75 per cent. are rejected. The other 25 per cent. are accepted. They work with only a small group at a time; the rest are put on the waiting list. If a patient should come without notifying his or her physician, and, at the same time, that patient is under the treatment



of a physician, he is not accepted. The patient is sent back to the physician with the request that a written note be forthcoming.

The criticisms of the movement are these: (1) The danger of the spread of the movement into incompetent hands. This is a danger which we, as medical men, must all recognize, that incompetent men, incompetent clergymen may start this work after reading two or three books, without a long psychological preparation. There they will fail; they will bring justified criticism of the medical profession down upon their heads. (2) The criticism has been that these ministers are practicing medicine. Let us see if they are practicing medicine. They have for a long time limited their cases to those which show a well-recognized moral, ethical, or spiritual defect, whether or not that was the symptom underlying the functional disorder. I presume that the clergyman is well adapted to treat that type of case. The patient does not expect spiritual consolation or ethical lectures from his physician, but does expect them from his clergyman, and therein lies the therapeutic value of any such method as that. These are the only types of cases they should take; they should not take types of cases that the neurologist is competent to deal with. They should only take the cases in which these elements predominate, and then only under rigid medical control. This would make the minister merely an adjunct to the physician, not working independently. And in the clinic in Boston not only is the patient given a thorough examination from the beginning, but, if accepted, that patient is kept under constant medical control, and reappears from time to time of re-examination. On account of the storm of criticism that has arisen in Boston, a new method of medical control has been instituted, and which will soon go into effect. A committee composed of four physicians of Boston brought out several rules. These rules have been published in various medical journals. The examination of patients at the church clinic has been abolished under these new rules. If a patient comes without a note from a physician, the patient is given an alphabetical list of physicians attached to the various hospitals. The patient is sent to an internist who makes an examination and states whether or not the patient is fit for the psychotherapeutic treatment of the Emmanuel Church. If a specialist is necessary, the internist calls in a specialist. Even before these rules were instituted the movement was safeguarded by rigid medical control, and under these new rules the control is still more rigid. No patient is accepted unless he pledges himself to remain under treatment for at least six weeks, and if at the end of that time longer treatment is necessary he is expected to remain longer. The methods used are in line with well-recognized methods of psychotherapeutics. The results with alcoholics have been very gratifying. In many of the poorer alcoholics they not only give them psychotherapeutic treatment, but the social service worker inquires into the surroundings of the alcoholic, the home conditions, and if the patient lives in a district of the city where the temptation to drink is the greatest, arrangements are made to move that patient to more cheerful surroundings. If there are any dangers in this clinic, they are thoroughly safeguarded by the train-

ing of the clergymen who have undertaken the work and by the thorough medical control we have over such work. The criticism that the clergyman is taking up the physician's work does not appear to me to be valid, because these clergymen are doing a type of work for which they are eminently fitted as clergymen and as psychologists, a type of work which we as physicians could not take up because we have not had that particular form of training.

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## THE MEDICAL USES OF HYPNOTISM.

HUGH T. PATRICK, M.D.

CHICAGO.

The first question that arises in connection with the medical uses of hypnotism is, Can people be hypnotized? They can—some of them. Just how many can be hypnotized nobody knows. The percentage of hypnotizable individuals in any group of normal persons varies according to the nature and general tendency of these individuals. Much, too, will depend upon the circumstances under which the attempt is made, upon the personality of the so-called operator, as well as upon the frame of mind of the subject.

Speaking from my own personal experience, I may say that I have an impression or feeling that such and such a person may be hypnotized. Sometimes, when I think I am able to hypnotize a person, I am unable to do so. An individual who is easily hypnotizable is, in a general way, one who is instinctively obedient and instinctively credulous: one who believes instinctively without criticism, without analysis, and without any particular process of reasoning, and who does what is told him. For instance, it is a well-known fact that the percentage of hypnotizable individuals in the German army is high, because these young men are so thoroughly trained in obedience that it becomes instinctive. The matter of association is also of importance. For instance, I know that Bernheim, in his wards at Nancy, hypnotized a large proportion of the patients in whom he attempted it, largely because everybody was being hypnotized, whether he had articular rheumatism, typhoid fever, secondary syphilis, chronic rheumatism, or hysteria. On the other hand, there are certain individuals who are inherently refractory to hypnotism, and many of these are the individuals who request to be hypnotized. They say they believe they can be cured by hypnotism. They are largely the type of individuals who read about cases in newspapers, magazines and encyclopedias; they are patients who attempt some sort of self-analysis of their symptoms and condition; they are the patients who reason in their own particular way about the nature of their maladies, and who have distinct and sometimes very fixed notions about them. In other

words, they are the people with the exaggerated ego, with a peculiar sort of mental hypersensitiveness and at the same time a fixity in their own opinions. These are the patients who will instinctively, not purposely, keep awake to see how it feels to be hypnotized. These are the refractory individuals, in whose cases it is useless to make the attempt.

As to the use of hypnotism in every-day practice, there are two distinct uses: first, its use in diagnosis, and, second, its use in treatment. Sometimes I think it is of more use in the former. In the first place, it is sometimes useful in the diagnosis of various seizures or attacks; in nervous explosions of one kind or another, and one of these is the fit or convulsion, or its equivalent. Occasionally it is absolutely impossible, from the symptoms detailed to us, to decide whether a given patient is suffering from hysteria or from epilepsy. Once in a while hypnotism may clear it up. Let me cite an example:

Not long ago a man was brought to me whose wife gave an account of his having had an epileptic seizure and immediately following it epileptic furor. Directly after the initial spasm he passed into a condition of great excitement, with destructibility, in which he smashed open a door, tore down curtains, chased his wife through the house, got a gun and chased his brother-in-law out into the road for some distance, threatening to shoot him. From an account of the symptoms I had every inclination to make a diagnosis of epilepsy. The case was serious for the patient and much more serious for the family. An epileptic in a furor is a dangerous man. During the physical examination of this patient, I noted two or three little things that made me doubt the correctness of the diagnosis I was then forming in my mind. I put the man to sleep, and he related to me in detail all that had occurred during this seizure; details of which he knew nothing in the waking state. This at once made it clear that the attack was not epileptic.

There is another kind of attack in which hypnotism has been of use in diagnosis; in the diagnosis between hysteria and epilepsy, or between an hysterical and epileptic state. It is well known that some epileptics pass into a condition of peculiar consciousness, during which they perform acts in an automatic manner; they may travel long distances, perhaps do things more or less bizarre, but perhaps nothing that is noticeable. After a time they regain normal consciousness and have no recollection at all of what transpired in the interim. The same thing occurs in hysteria. In some instances it is practically impossible to know whether the attacks have been hysterical or epileptic. The diagnosis, needless to say, is of the utmost importance to the patient, and here hypnotism is sometimes an aid. For instance, not long ago I saw for the third or fourth time a young man who, while working in one of the tall office buildings, felt ill, and went down to one of the drug stores to get a headache powder. This was the last thing he remembered until he regained consciousness and found himself sitting by the roadside out in the country, exceedingly tired, no hat, and his hair full of cinders. He went to the nearest farmhouse, inquired where he was, and what was the day of the week. He had lost two or three days, and found that he

was in Wisconsin, north of Milwaukee. I had seen this young man before, when a physician brought him to me because of most excruciating headaches. The young man was quite ill, and I was inclined to believe that he had some intracranial growth, especially as in one of the severe headaches apparently he had lost consciousness and had nearly fallen down. I saw him once after that, and no brain tumor had developed; but he had had occasionally these severe headaches, and still my mind was in doubt as to what really was the trouble. We know that certain organic lesions of the brain cause epileptic states, and here was this young man, brought to me for the third or fourth time. He remembered absolutely nothing for this period of two or three days. I put him to sleep, and he told me in detail all that had happened during the apparently unconscious period. Consequently the diagnosis of hysteria was easy. Of course, he might have a brain tumor and hysteria, too, but it turned out that he did not have a brain tumor.

There are other states in which hypnotism helps in the diagnosis, as, for instance, a diagnosis between functional disease and organic disease. It is important to differentiate between the two, and hypnotism helps in this regard. I need not enumerate cases. Hiccough may be an exceedingly rebellious symptom of very grave organic disease. It occurs as a very troublesome, rebellious, and continuous symptom of hysteria, and sometimes hypnotism will settle the diagnosis at once.

There is a third class of cases in which hypnotism helps in the diagnosis, and that is in those cases in which there is a combination of organic and functional disease, in which suggestion during hypnosis will remove or alter certain symptoms, so as to enable us to distinguish what part of the symptomatology is due to organic disease and what part to functional trouble.

When we come to therapeutics I should like to say, first of all, that, in my opinion, the cases in which suggestion during hypnosis is the best treatment are very infrequent, and I think that my belief is based not only on my own experience, but borne out by the experience of most physicians who have gone through the process of investigating the question and trying it themselves. I could enumerate many clinics where hypnotism has been used to a considerable extent for a more or less limited period. In the same way I could tell from my acquaintance of a good many more or less prominent medical men who have used hypnotism to a greater or less extent, and gradually have abandoned it or nearly abandoned it, and the men who have remained for a rather prolonged period enthusiastic hypnotists are generally not the best educated and best balanced medical men. There may be exceptions to that, but I do not happen to think of one.

Let us take up rapidly the different classes of cases as they occur in practice. In the first place, the use of hypnotism in surgery is practically *nil*. It has been used to induce anesthesia for operation, but I doubt if it is now used to any great extent in that way anywhere. A very good subject, one who has been hypnotized, may be very easily put to sleep



and have an operation performed on him without pain, without the danger of a drug anæsthetic. I have no doubt that certain women can be normally confined without pain by means of hypnotism, but, after all, hypnotism is not used very much either by the surgeon or the obstetrician.

In organic diseases, hypnotism has an exceedingly limited use, but it now and then has a very distinct and very great use. I have seen very few cases in which it was of very great use, but occasionally the thing does occur, and with your permission I will very briefly report one such case.

A good many years ago a lady came to me asking whether by hypnotism I could alleviate a trouble which she had, and which to her was terrible. She had a horror of thunderstorms. When she was a girl, in the hands of an injudicious mother, she had been horribly frightened at one time by a very intense peal of thunder and a close flash of lightning, and she was told she had been struck by lightning. That was the beginning of this fear. It grew until this mature, well-educated, very intelligent, unusually cultured and largely traveled lady could not stand a thunderstorm without extreme distress of mind and great perturbation of body. She had profound physical prostration, and, more than that, she had uncontrollable vomiting, violent retching, which kept up for half an hour or more. Now, this woman had very grave organic disease of the heart. She was in a serious condition as regarded her cardiac muscle, from which trouble she eventually died. She was in the hands of a most competent physician, and she asked me to treat the nervous trouble without letting him know, which I was willing to do. He treated her for heart trouble, and, without his knowledge, I attended to her phobia, and was able to control it absolutely. It took me a little time, but finally I adopted the plan of having her sleep through every thunderstorm. Following the suggestion made during hypnosis, as the thunderstorm approached she went to sleep and slept through it. After it was all over, she never vomited, and was never prostrated or tired. After a time she had an acute exacerbation of her heart trouble, from which she nearly died. With this, as frequently happens, came a most intractable insomnia. Her physician and the consultant were in great straits to keep her alive, because she could not sleep, and they were afraid to give her hypnotics. Finally she asked them to send for me as she was sure I could make her sleep, and they did so. I stayed with her all night, the first night. I would put her to sleep for a short interval, then have her wake up, and put her to sleep again. In this way I was enabled to carry her during the night through a most refreshing and restful slumber. I did this until she began to sleep fairly well. I thoroughly believe that, with the aid of the skilful physicians she had, I was the means of prolonging her life, because I am certain she could not have stood very many of the violent retching and vomiting spells, which she had whenever a thunderstorm came, which prostrated her, and in some of which she nearly died. But this is an unusual case. In other cases of organic disease, patients may

be relieved of suffering the same as their sufferings may be allayed by other forms of psychotherapeutics, as in some cases of organic disease with functional disease, but in which the functional disease is induced by organic difficulty. I recall two cases of combined degeneration of the spinal cord, in which paresthesia of the legs was marked. The patients had acquired astasia-abasia, or inability to walk and stand, because of the suggestions conveyed to them by the organic symptoms. The functional trouble was removed by hypnotism, much to the relief of the patients and greatly to the addition of the powers of locomotion. The spinal-cord degeneration, however, went on, and the patients finally died of spinal-cord disease.

There is another class of diseases, the psychoses; melancholia, mania, paranoia, dementia præcox, etc., in which hypnotism is of no avail. Then there is still another class, of vicious habits, and in this group I might include the individuals suffering more or less from congenital debility; that is, they are the weaklings who succumb to temptation; they are the men or boys who commit minor thefts. They are apt to become drunkards; they are apt to become excessive cigarette smokers, and later general inefficient, petty criminals or land in the penitentiary. In a small proportion of these cases a good deal can be accomplished by hypnotism, and there are practitioners who treat large numbers of them, it is said, with success. I have treated but one such that I recall: a man who constantly would spend money which he did not have, who would appropriate rather small amounts belonging to others; who repeatedly would draw checks and pay for things with checks when he had no money in the bank. He had caused his father years of trouble. The treatment of this case covered a number of months, and during this period and for some time afterward he indulged in no vices or crimes. Later he relapsed.

Further, I may mention that group of cases which nowadays is apt to be called psychasthenia; namely, patients with phobias, imperative ideas, and things of that kind. In some of these hypnotism is of distinct use, but I think they are exceptional. Let me illustrate the kind I mean. A lady was brought to me in great trouble because, she said, she had an impulse to kill her children, two little girls, to whom she was devoted. In this case, as in nearly all cases in which the patient complains of an impulse to do some horrible thing, I found that she did not have an impulse to kill her children at all; but she was afraid she might have the impulse; that she might at some moment lose her mind or self-control. She had a phobia. After talking to her about her trouble, and believing it easy to get at it by hypnosis, I hypnotized her and it proved effective. She had a few treatments and was entirely relieved. After a while the trouble came back, then she had some more treatments and, so far as I know, she permanently got rid of this particular phobia. Sometimes these cases are very difficult to cure and now and then we find one for which we can do nothing. Occasionally suggestion during hypnosis seems to be the best treatment. This applies as well to imperative ideas in children. A child, for instance, has to do everything three

times. Or he can not walk on the sidewalk without stepping on the cracks, or he touches every second fence post, or reads signs both forward and backward, etc. These cases are usually easily controlled by hypnotism, but it is not the best treatment for most of them.

As the time limit bids me stop I may hastily add, in conclusion, that now and again hypnotism seems to be the most feasible means of treatment of a tic (not tic douloureux) and of insomnia of certain types. Needless to say, the malady in which hypnotism is most applicable is hysteria, but here, again, I believe that it is only the exceptional case that is best treated by this means.

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## THE SCOPE OF PSYCHOTHERAPY.

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The recent interesting meeting of the Chicago Medical Society devoted to psychotherapy brought out a number of valuable details. But, with the exception of Dr. Pairick, who limited himself to hypnosis, none of the speakers stated explicitly what or how much can be really attained by influences brought to bear upon the patient's mind. This, however, is the very essence of the problem. If any other therapeutic method is recommended, the reader wants to know not merely how to carry it out, but especially what it can do, and for what class of ailments it is suitable.

Psychotherapy, whether utilized unconsciously through the inspiring manner of the physician or employed intentionally by the over-confident layman or the unscrupulous pretender, influences the mind in two directions. It inspires confidence and diverts the attention from the disease. The hope of improvement stimulated by the confidence gets the patient to look for evidences of progress and thus feeds on itself. This leads to a buoyant state of mind, with all its stimulant influence upon mental and physical activity and nutrition, replacing the previous despondent and hence injurious disposition of the patient. Even more important is the withdrawal of the attention from the disease. It is scarcely necessary to dwell on the exaggeration of all suffering by concentrated anxious attention.

What and how much can be accomplished by psychotherapy in various diseases can only be learned by clinical experience. A good deal has been recorded in literature from the days of Braid up to the present. Every physician of moderate experience can add to this from his own knowledge. The bulk, however, of alleged illustrations of the benefits of psychotherapy are the unrecorded legends of cures by laymen or churches. In judging the value of this miscellaneous mass of evidence we must, first of all, inquire into the authenticity of any case. No matter how interesting a narrative may sound, deduction can be drawn from

it only if its facts are vouched for by competent observers. All other testimony must be ruled out as not conclusive. Case records properly qualified should then be critically examined in order to decide whether the disease followed a different course from what might have been expected without the psychic influences. It requires, of course, an observer well versed in the natural course of disease to decide this point. Inquiry conducted along these lines leads to the following summary:

While it is well known that the objective signs of any disease are directly proportionate to the intensity or extent of the morbid lesion or process, the subjective symptoms often seem to be more capricious in their degree. They vary with the individuality or even with the temper of the patient. The intensity of the pain and of other disagreeable sensations produced by a disturbance is increased by the concentration of attention, and conversely diminished by diversion of the attention. That part of the nervous system in which sensory impulses are elaborated into conscious sensations is not a recording instrument of unvarying accuracy and sensitiveness. On the contrary, physiological experiments upon both man and animals have shown that the intensity or vividness of sensations varies under different circumstances, being especially influenced by the simultaneous occurrence of different and separate sensory impressions. A sensation of barely sufficient intensity to enter the domain of consciousness requires undivided attention for its detection (for instance, the fainter subjective noises of mild forms of ear disease). Such very faint sensations are, on the other hand, easily overlooked when the attention is diverted from them. Of course, the more intense a sensory or painful impression the more difficult it is to divert consciousness from it by engrossing the attention otherwise, and in the case of a very severe pain it is simply impossible to escape it by any kind of diverted mental activity. It is needless to illustrate these doctrines by repeating examples that can be found in works on experimental psychology. The oft-quoted legend of the soldier who does not know that he is wounded while in the fierce struggle of the battle is not a mere myth. Similar instances are common enough in every-day experience. We can hence expect and, indeed, observe that, whenever the pain and discomfort of disease is exaggerated by concentration of attention, we can relieve materially by any means that succeed in diverting the attention.

It is often stated that mental therapeutics will lead to results only in hysteric patients. This is not an accurate statement. There are very few people, indeed, in whom discomfort and pains are not intensified by anxiety, want of hope or introspective observation. Hence proper psychic influences are of benefit to the great number of sufferers. We can only say that the hysterical subject is more apt to magnify his distress by his uncontrollable imagination than the average of mankind. Peculiar to hysteria, however, is the liability to persistence of morbid sensations after their original cause has ceased to be active. The writer's personal knowledge of such "remembered discomfort" pertains especially to sensations in the throat after the temporary presence of a foreign body and discomfort from the use of the eyes after some transient inflammation



or trivial trauma in hysterical patients. When these "remembered sensations" have existed for any length of time they may prove very difficult to remove by suggestion or any other influence. In relatively recent instances, on the other hand, any psychic influences which give the patient the impression that they are definite therapeutic methods, like electricity or some placebo, often succeed promptly.

Not only the morbid sensations of disease, but also its interference with motor functions depend considerably on the patient's state of mind. Muscular weakness, partial paresis or interferences with motion as the result of tenderness can be ignored under the stress of excitement or the desire to accomplish an object. But all these hindrances are just as sure to be exaggerated by attention to their existence. Hence the thorough belief in a cure can readily simulate the miracle of cure in a patient who had previously "given in" to an unnecessary extent to some interference with one of his motor functions. How readily the conscious attention may hamper an otherwise normal function is sometimes illustrated by the inability of some persons to empty the bladder in the presence of the physician. In instances, however, in which the interference with function is exactly proportionate to the damage done by the lesion psychic influences fail. Thus, for instance, we can measure directly the interference with the motion of one of the external eye muscles in paresis of its nerve by the degree of diplopia produced; in other words, by the distance of the double images. The degree of this disturbance is not influenced by the mind of the subject, and hence no psychic therapeutics can change the measured distance of the double images.

The query whether the mind can influence the actual course of lesions, as well as the subjective symptoms produced by them, is a much more difficult one to answer. As a rule, the cases quoted by older writers and the bulk of the illustrations mentioned by the laity can not stand the test of rigid criticism. Closer inquiry generally shows that subjective improvement was mistaken for objective changes. Indeed, it would be difficult to find the record of a case in which the direct influence of the mind on the course of any morbid lesion had been observed beyond doubt. It is easy enough to demonstrate the effect of emotions, of mental activity or mental fatigue upon the circulation, the respiration and some secretions; in fact, upon any process controlled directly by the nervous system. But it has yet to be shown that mental processes can in any way influence the phenomena of growth, of nutrition or tissue change.

Yet it seems reasonable to admit that the state of the patient's mind may indirectly influence the struggle with certain chronic diseases, especially those the course of which depends somewhat on the state of nutrition, as, for instance, slow tuberculosis. With confidence and hope a patient is much more apt to avail himself properly of all hygienic advantages and to utilize them to a better extent than when in a despondent frame of mind.

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## PSYCHOTHERAPY.\*

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Whether you approve or disapprove of psychotherapy theoretically, at least practically it has been used on you, and you have been using it on others from the day your mother kissed your bruise and said, "Now, it is well," till to-day when you used electric treatment, prescribed large doses of unknown and mysterious compounds, or brought confidence to the discouraged patient by the genial smile and encouraging word.

In very many discussions on psychotherapy the unconscious or the subconscious plays the leading part. This is to a psychologist the most discouraging aspect of the whole question. Personally I am convinced that in a discussion of psychotherapy the word subconscious or unconscious should not be used, and, above all, it should never be presented as an *explanation* of anything there. In my work as a teacher of psychology I devote relatively much time to the discussion of the subconscious. But when I come to psychotherapy I will have none of it. In the discussion which follows please remember that in the fringe of my consciousness in preparing this paper there has ever been present a decided antipathy to the emphasis upon the subconscious as a causal or explanatory factor in producing or curing any forms of disease. What I shall say will, therefore, be, in part at least, a protest against the present conception of the subconscious in its relation to therapy.

With this introduction, I turn to the more definite discussion and shall confine myself to the answering of the three following questions:

(1) How shall we classify cases which may possibly be treated by psychotherapy? (2) What are the devices which have been employed in psychotherapy? (3) How does the mind cause and cure disease?

All sorts of diseases have been alleged to have been cured by psychotherapy. A study of the cases, however, makes it clear that the greatest success has been with particular forms of disease. For certain reasons it is advantageous to think of all diseases as either organic or functional. All diseases which seem to be related to overt organic lesions may be thought of as organic diseases. Diseases in which there is no overt lesion of an organ may be thought of as functional. The line between the two is not at all clear. When we think of diseases as thus classified we ordinarily assume that psychotherapy has to do only with functional diseases. This distinction may be wise, but certainly it is not yet justified in all particulars.

Another distinction which may be made is as follows: Certain diseases are related to the activity of the nervous system either as to the cause or more often in the cure. Thus the disease may be organic, but the recuperation and the overcoming of the lesion may be dependent upon

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\* Read before the Evanston Branch of the Chicago Medical Society.

the action of the nervous system. With this classification in mind we might say that psychotherapy can have no possible effect in diseases in which the nervous system takes no part—if, indeed, there be such a disease. On the other hand, the psychotherapist might have reason for asserting that his form of therapy has effect with all diseases which are in any way dependent upon the nervous system.

These two classifications are based upon anatomical or physiological distinctions. As a psychologist I prefer to think of all diseases in which psychotherapy may be effective, as dependent upon some mental exaggeration, bad mental habit, mental twist, wrong focussing of attention or some other mental perversion. These diseases display no new and mysterious working of the mind, but merely a perversion of the normal mental processes. They are not imaginary diseases, although they may be due to diseased imagination.

These mental perversions or exaggerations, which cause disease or hinder recovery, are not to be thought of as independent of bodily conditions. The sick mind is usually found in a sick body. The normal body is usually found with a normal mind, but such is not always the case. Occasionally the mind seems peculiarly clear in sickness of the body, and occasionally the unsound mind is found in a well body. In general we do well to assume a parallelism between the mind and the body at least as far as the nervous system is concerned. In practically all cases, if, indeed, not in all, we are safest in assuming that the individual is to be considered and not his body nor his mind alone. As in health so in disease, the relationship of the mind and body is to be kept in view. The classification of symptoms then is simplified. There is nothing peculiar or magical in the action of mind in producing or curing disease, but in sickness as well as in health the action of the mind is important. We can not classify, with certainty, cases in which psychotherapy is the only curative factor to be considered, nor cases in which psychotherapy has no place. It is merely a matter of degree. In most diseases it has a place, in exceptional instances it has practically the exclusive power, in other exceptional cases it has perhaps no place at all. Cases are not, therefore, understood by classifying them into particular pigeon holes, but by comprehending the case in its relation to the normal action of which the present case is a perversion or exaggeration. It can be understood, too, only when the relative importance of the bodily and the mental factor involved is appreciated. This fact makes psychotherapy one of the most difficult, and perhaps the most difficult, of all forms of therapy. Cases do not admit of mechanical classification and routine treatment.

With this brief discussion of the classification of diseases, we may pass to the consideration of the second point, i. e., devices or methods in psychotherapy.

In ordinary cases the usual forms of persuasion are sufficient. A good, sensible talk, a sympathetic attitude, the appearance of confidence in handling the case, an apparent assumption that the case is well in hand—these and kindred forces are the most potent factors in psychotherapy. You all use these, and the longer you live the greater impor-

tance you give to such treatments. Success in medicine is dependent as much in the skilful use of these things as in scientific knowledge. Without discussing these ordinary methods, we turn at once to the devices which are and must be resorted to because the simpler methods are inadequate.

In these extreme cases, the methods employed in psychotherapy are all directed to distracting the mind from its injurious habits, attitudes or ideas. This distraction is then followed by suggestions which lead to healthful habits, attitudes or thoughts. The distraction is secured in one of two ways: First, and mainly, by securing a somnolent condition in which the mind is less persistent in holding on to the unhealthful condition. The second method is that of excitement, in which the mind is thrown into an unusual condition, and hence is more easily distracted than would be possible in the normal condition. As stated, the drowsy somnolent condition is the favorite one for the working of psychotherapy. In illustration of this fact, we need to turn to history as well as to current practices. For purposes of illustration, I desire to describe the method known as incubation and then to make a brief reference to Christian Science and hypnosis and kindred practices.

Incubation, which should really be called temple-sleep, probably dates from very ancient times. It is incidentally referred to by Homer and is fully described several centuries before Christ. The gods were supposed to make revelations to mortals by means of dreams. The most natural place to expect such revelations would be in the temples of the gods and following sacrifices. The ancients went to the gods for revelations concerning all sorts of private and public difficulties, but the cure of disease became the most common cause for which such revelations were sought. The afflicted suppliant made his sacrifice to the god and then lay down in the temple to await a revelation in a dream. A statue of the god seen before falling to sleep, together with the whole setting, was frequently adequate to produce the desired dream. The revelation might be that the patient would take a particular treatment and the revelation would be so interpreted even when extremely vague. Thus when a patient dreamed of seeing a sheep he knew that he was to use the plant sheep's-tongue as a medicine. The patient might dream that he would be healed at once miraculously, and in such instances the patient seems to have believed himself cured, even though a relapse soon followed because of some unknown offense to the god. This practice of sleeping in temples seems to have been very much more common than was supposed till the last two or three years. Recent excavations and researches have discovered much evidence of an extensive practice of this sort from prehistoric times even down to the present year. It has been estimated that there were at the same time over 300 temples dedicated to Æsculapius in which incubation was common. Large dormitories, or at least colonnades, were to be found in connection with some of the temples, and it is assumed that very great numbers of patients were in constant attendance. In some instances baths and means for exercises and other equipment were at hand. This practice, originating in paganism, was modified and con-



tinued into Christianity and was a very profound factor in the church in the early centuries.

The silent treatment of Christian Science seems, in part, to be at least similar to this temple incubation. The patient is put in a relaxed condition and in the presence of one who takes the place of the priest in the temple. The presence of the healer assists in holding the suggestion of health and banishing the one of disease.

Hypnosis even more fully reproduces the conditions which proved so successful in the temples. Here we have ideal relaxation, and the wise operator gives the healthful suggestions in the most skilful manner. All three of these methods or devices, and others that might be mentioned, owe their success mainly to the relaxation which they secure. Christian Science is such a soothing belief. "If there is no pain, no disease, no afflictions of any sort, why should I be so tense and take my imagined afflictions so seriously? All is well, God is good, and there can be no wrong or pain in His universe. I will just drop my fretting and take it easy." In the state of mind produced by such ideas, old evil habits and attitudes may lose their grip and give way to healthful ones.

In apparent contrast with the devices of relaxation stand the methods which by means of some excitement get the subject out of his ruts and compel him to give his attention to things other than his afflictions. When his mind has been thus distracted, helpful suggestions may be given. The working of excitement in banishing pain is very well recognized. Soldiers receiving wounds in the heat of battle ordinarily do not feel the pain of wounds. In athletic contests the participants are almost immune from pain. When in college I was playing an exciting game of football. After the game was over and the excitement had ceased I discovered that one of my fingers was either broken or badly dislocated. During the excitement there was a complete inhibition of pain.

The excitement attendant upon entering the dentist's office is frequently sufficient to cause a tooth to cease aching. When you enter the sickroom, the excitement of the event is sometimes enough to stop the patient's suffering. The paralytic gets up and flees from the burning house. The chronic invalid arises in an emergency and continues to perform the normal daily tasks. The defeated army becomes afflicted with diseases from which the victorious army is immune. The fact that excitement may banish pain is taken advantage of in various forms of psychotherapy. When the patient becomes thoroughly excited, he ceases to feel his pains, and hence is in a condition to receive the suggestion that he is completely cured. The result may be permanent, or when the excitement has ceased the poor unfortunate may "lose his faith."

Among the most successful methods of securing this requisite excitement should be mentioned the following, among many others: the so-called divine healing, the laying on of hands, the anointing with oil, the pandemonium from the amen-corner, the beating of drums, primitive dancing, the display of sacred relics, sacred waters, amulets, phylacteries, the healing touch of a king: and with these should be included Perkin's tractors, electric belts, and doubtless, to a large extent, electro-

therapy, hydrotherapy, patent medicines, home remedies and any and everything else which the doctor does or gives and which is professionally known as a placebo. The value of all these is perhaps mainly in the expectant excitement which they engender. This expectant excitement is followed by an inhibition of pain, and then the helpful suggestions have a chance to perform their healing functions.

All devices in psychotherapy from Christian Science to placebos have the common function of causing the perverted mind to let slip its perversions. Whether this is done by producing a state of drowsiness, or by an exciting distraction, the difference is immaterial. In selecting devices I should have no hesitation in selecting the most effectual, even though it should prove to be a pink pill or a harmless surgical operation. In extreme cases the ordinary placebos are inadequate, and more difficult devices have to be employed.

In treating the cases which you physicians of the vicinity have sent to me for treatment I have employed hypnosis, hypnoidization, relaxation, persuasion, excitement and a lengthy process of re-education. I have employed hypnosis in a relatively large number of instances, because I assume they were cases which you had diagnosed as requiring hypnosis, and they were, therefore, exceptional cases and demanded exceptional treatment.

All methods or devices of psychotherapy have a common purpose and that is to get the patient out of his mental rut and then to present the helpful suggestions. Whether the device is normal persuasion, relaxation or excitement, the distinctions are immaterial. There is a striking similarity among all the devices, and the more we study them the more they appear alike, even though each is assumed by its advocates to be fully differentiated from all others.

The third and last point is the *how* in psychotherapy. How does the mind cause or cure disease?

The action of the mind in psychotherapy is of the same sort as the mental action with which we are most familiar. Mental action is one and the processes which are least known are best understood by reference to those which are best known. The thesis is to be maintained that the best known acts (such as movements of the skeletal muscles) are really but little known; and the so-called unknown and involuntary acts are not particularly different from the voluntary and so-called well-known ones.

As an example of a voluntary act let us consider the bringing together the tip of the thumb and the tip of the fourth finger. This is one of the actions that are best known. Here we seem to have full control of the muscles and produce the desired movements at will. Let us try to analyze this simple and familiar act. How am I enabled to accomplish the desired end of bringing these two members into juxtaposition? I certainly could not do it if it were not for the perfect working of a host of nerves and striped muscles. A knowledge of this anatomy and a knowledge of nervous currents involved in no way helps me make the movement and only indirectly does such a knowledge offer an explanation of the power.

To understand the act we must also understand the psychology of movement. What is the mental process which corresponds to the movement or by means of which I may cause the movement? An analysis of the act is difficult, but will result in discovering several possible factors which are involved. If the act is a new one I can not "will" it directly, but only indirectly. The mental factors which produce the act, or the so-called "cues" of the act include a feeling of the muscular contractions in the parts affected, perhaps a visual sensation or idea of how the hands look or will look when in movement. If now I want to move my hand I get into my mind an idea of how it will feel to move it and how it will look when it is moving, and, behold, the fingers move! I do not control the act directly, for I do not know what muscles, what nerves and what coordination of currents are necessary. What I do is to get into my mind an image of the hand in movement or of how it will feel, and the result follows in a perfectly normal and satisfactory manner. These movements which we understand fully turn out to be very wonderful things and not at all directly under the control of the will. I can not contract a muscle directly, but I can call to mind an image which is always followed by the desired movement. So all my needs are supplied, and I flatter myself that I fully understand voluntary movement and that I have full control over it.

Certain of the muscles of the body seem to be entirely beyond our control, but upon more careful examination we find that this is not true. Some years ago I was working in a psychological laboratory and trying to find out how a subject's heart-action was affected by pleasure and displeasure. The subject always produced the results which he had reason to expect. I then dropped out the pleasing and the displeasing stimuli and had him imagine an accelerated heart beat. The acceleration followed immediately. The corresponding results followed the imaginary retardation. I was narrating this incident to a doctor friend. The friend said that he had even greater control over the beating of his heart and that he could cause his to stop beating entirely for a considerable length of time. I doubted his statement till he demonstrated it to me.

The power of the mind in controlling the action of the heart and in producing profound changes in the circulation is seen by blushing from the mere presence of appropriate thoughts. I do not fully understand the mechanics involved in dilating the blood vessels and accelerating the action of the heart, but I can secure the results by simply calling up ideas functionally associated with such actions. The similarity between such actions and the actions of the group of muscles that move my fingers is apparent. The anatomist may raise the objection that the two classes of actions are inherently different. In the action of the fingers the striped muscles are involved and the nervous current goes direct from the central nervous system to the muscles involved. In the latter case both striped and unstriped muscles are involved and the nervous current does not go direct to the muscles, but only indirectly and by means of the sympathetic system. But, as Howell says in his physiology, when discussing the sympathetic system, "There is no apparent reason in the ana-

tomical arrangements why these fibers should be free from voluntary control. Their distinguishing characteristics in comparison with the nerves for the voluntary movements is the fact that they all terminate first in the sympathetic nerve cells; but this fact gives no explanation of the absence of control by the will." I should not have the temerity to state that we have more or less control over all the so-called involuntary or unstriped muscles. I do feel sure that the extent of our control over the striped or voluntary muscles has been exaggerated and that our lack of control over the unstriped or involuntary muscles has been even more exaggerated.

In psychotherapy the control of muscles is certainly not of greater importance than the secretion of glands. It is often taken for granted that such secretions are wholly independent of our wills. That such is not the case is evident to us all. Secretion from the salivary glands is one of the essential factors for the proper digestion of food. I do not know definitely just where the nervous current originates, along which path it travels, or how it affects the gland or how the glands act. I am as ignorant of all this as I am of the physics involved in the movement of my hands. It is for me sufficient if I can cause the hand to move when needed and the salivary glands to act when occasion arises. I know how I may cause these glands to act. If I concentrate my mind on the beauty of a ripe peach, of its delicate coloring and its luscious taste and aroma, if I think of a gastronomic sympathy in which this peach is the climax, I find that my salivary glands have been stimulated to activity. I express it by saying that it makes my mouth water.

Recent experiments have shown that the secretion of gastric juice is also subject to mental control in similar ways. I am not only able thus to stimulate the action of these glands, but I know that I must control my mental process wisely or under certain conditions a lack of secretion will result. Thus if I am worried or anxious during the process of eating, the secretion of the glands is inhibited and I am likely to have trouble. The digestion of food is, in part, determined by the mental attitude of the patient. Skepticism and worry are followed by indigestion, but religious faith and optimism are favoring conditions for the proper assimilation of food.

A very momentous causal factor in health and sickness, in producing and curing disease, is the action of the involuntary muscles and of the glands of the body. As typical examples of such we have considered the muscles connected with the circulation of the blood and two of the glands connected with digestion. These are but typical examples. In these examples it is clear that the mind of the patient is a grave factor, and if he gets into bad mental habits in these particulars he may produce disease; if he then is cured of his habits he will greatly increase his chances of recovery.

The mind does not influence these so-called involuntary muscles and the glands in a way totally different from the way we influence our so-called voluntary muscles. In neither case do we make the matter clearer by supposing that there is a subconscious, a coconscious, an unconscious.



hyperconscious, a superconscious, a subwaking, a split-off, a secondary, a subliminal, an objective or a transcendent mind. I am totally ignorant of the method whereby I control my muscles in moving my fingers. I may cover my ignorance by the use of some of these high-sounding terms, but it will not help matters at all. I assume that I have satisfactorily explained the movement of my fingers when I have discovered the mental factors which, when present, are invariably followed by the movement. In psychotherapy the same sort of explanation is all that we may hope for. Are certain mental conditions followed by other conditions? Are there certain mental processes which tend to, or actually do, increase the chances of disease? Are there other mental states which tend to increase the chances of health? A discovery of such mental actions is as far as it is possible for us to go in explanation of the results of psychotherapy.

Such action is not fundamentally different from our ordinary actions and is not made plainer by the use of such terms as subconscious or unconscious. The understanding of the action of the mind in disease is not laid bare and controlled by any mystical or magical power. It is hard to educate the normal mind and get it to follow in desirable paths. It is even harder to re-educate the perverted mind and get it back into normal methods when once bad mental habits have been formed. Psychotherapy needs the educator rather than the charlatan.

No man is in a position to diagnose cases in psychotherapy till he is at least somewhat of an expert in normal, as well as in abnormal, psychology. His diagnosis would be unreliable unless he were also an expert in the knowledge which we find possessed only by competent medical men. We all have more or less knowledge of psychology, but our ignorance of medicine may be almost universal. In diagnosing disease and prescribing methods for its treatment the doctor is our only safe agent. If he possesses an expert knowledge of psychology and of education, he has greatly strengthened his powers of usefulness. If, however, it is a choice between much psychology and little medicine or a little psychology and much medicine, I should entrust myself to the latter.

I am a profound believer in the power of the mind in causing and curing disease, but I believe that it is done in no mysterious or subconscious way, but in a perfectly normal and law-abiding manner. For the controlling of this mental force the physician should be the best equipped. The especial necessity for the physician in all such instances is made obvious when we consider that the mental and the physical are not two distinct things, but two aspects of the unitary individual. The layman who assumes to treat disease without the prescription of a physician is performing a dangerous act. In certain instances it may turn out luckily, but it is not to be looked upon with approval even in such cases. Where the physician's training and powers are in other lines, he may be justified in calling to his assistance persons who have given special attention to the processes of re-educating the patient out of the bad habits back into habits of mind which are productive of health. In such treatment nothing peculiar, mysterious or weird is being accomplished. To

teach a patient to control his thinking at night and thus cure insomnia might be as difficult as to teach him the binomial theorem in mathematics. Occasionally a man may be taught a thing in a moment, and perhaps there are instances in which patients may be healed instantaneously by psychotherapy. The one case would be as wonderful as the other, and in each we should assume that the results were not very great or that the person had completed the preliminary stages and needed assistance merely in completing the process. The results secured in psychotherapy are not different from other results and they are not secured by different methods. We can only understand psychotherapy as we see its workings in the light of other and better known things.

Cases should be diagnosed by the aid of the science of psychology, and the prescription should be based upon a knowledge of the laws of education. Cases are ordinarily not wholly mental cases. The mind and the body are both likely to run a parallel course. The diagnosis, therefore, needs the skill of a physician. The treatment is usually not only educational, but other forms of therapy should be used simultaneously. Psychotherapy is not a form of therapy apart, but is one of the subsidiary forms of therapy, all forms of which should be at the command of the physician. Although psychotherapy may remain subsidiary, it is still to-day and always has been very important. The future will possibly see no waning of its power, but we all trust that it will gradually pass out of the hands of the unworthy and become a recognized part of the service rendered by our physicians.

Prophylaxis and therapy should not, on the other hand, be wholly divorced from the unskilled. Knowledge of sanitation and prevention and doubtless much more should be common knowledge. Our schools and churches should teach noble and health-giving truths. The physicians should be our specialists and teachers, but society as a whole should have a part in the prevention and cure of disease.

#### DISCUSSION OF THE SYMPOSIUM ON PSYCHOTHERAPY.

Dr. Archibald Church:—The wave of psychotherapy taking the forms of theosophy, Eddyism, mental healing, we have seen manifested in this city under the impelling personality of Dowie. And now it comes to us, naturally with some refinements, from the Emmanuel Church in Boston. It is to be regretted that we can not exercise the same control over those who are not following in the footsteps of this Boston cult but tending to run wild. After the very lucid exposition given by Dr. Coriat to-night we can only endorse what they are doing there.

Right here arises the pertinent question, Why are we having this awakening, or this intense investigation into the mental side of human activity, with its application in alleged psychotherapy? It seems to me, that for some time these movements, which are not world-wide exactly, that are largely American in origin, in manifestation at least, are the recoil of our people against the materialism which has marked us for the last couple of generations. We hear on every tongue that we are living in an electric age, an age of steel, a wireless age. Now if you scratch any man deeply enough you will find a substratum of mysticism. We cannot shake off the shackles of our ancestry, and it will be some time, even though we are taught all the lines of physiology, before psychical movements of this character will be impossible. Everybody is superstitious; everybody is more or less mystic; everybody is more or less religious. If we can utilize these factors

for the good of the individual and the good of the community, great benefit will result. But they are also capable of abuse.

I have felt that there were some perhaps who were disposed to entertain the suspicion that the Emmanuel Movement was an offshoot from the Mother Church in Boston, and whether this offshoot is to be a healing branch, or a noxious weed, is still open to question. If this so-called Emmanuel Movement can be controlled under medical direction and can be limited to the moral turpitudes and the religious disquietudes which seem to be a proper subject for its activity, to the class of patients who are accepted in the Emmanuel Church, certainly there should be no quarrel with it. But in view of the fact that the church has been losing in its dignity, its importance, its influence, and that the clergy has been shrinking in its own estimation and its social position; that the theological schools have difficulty in securing candidates for admission to the ministry; that many churches on Michigan avenue and elsewhere are in financial straits; and that their congregations are dwindling; that at the same time there is perhaps a little envy at the unusual prosperity of the Church of Christ, Scientist; that from all these causes this new line of activity and business appeals more or less to the clergy. The situation for them, however, is one of grave danger. It is not unlikely that such churches as enter this field may find that they have created a Frankenstein which will give them a long chase before it can be overtaken.

As far as this attempt at psychotherapy is concerned, if it can benefit these cases normally, well and good. If it can cure neurasthenies and hysterics, or remake neurotics, well and good; but the difficulty is that as soon as this fashion in mysticism loses caste; as soon as the style changes, these people are going to seek some other avenue for relief, some other occult sort of aid, and the church will have put itself in a position of great discomfort, with loss of dignity, and with loss of prestige.

As far as the question of psychotherapy is concerned, it is comparatively a simple matter. We can easily formulate all the elements that enter into psychotherapy. We can readily establish its limitations. Given abnormal mental action, we may attempt by some means, whether it be Eddyism, by the Emmanuel treatment, by the asseverations of Dowie, by the application of high potencies, by hydrotherapy, or by the professional ipse dixit frequently repeated, to supplant the morbid habit of mental activity with a wholesome one. A good psychotherapist is usually born, and rarely made. He must be a man of common sense, of observation, who can turn to his use any agency which falls to his hand, so that he may use in one case a dozen things, and in another case a dozen other things. He must apply those agencies or remedies that are suitable to the case, and these do not always come from study or from experience. The successful psychotherapist is a man of certain personality; he must be able to inspire confidence, and if he have enthusiasm, though he be deluded as Dowie or irrational as Eddy, he may sway thousands.

I believe that the criticism which has been passed on the curriculum of our medical schools, in that we have neglected the physiological-psychological laboratory, is abundantly substantiated. I think our medical men should know that mind is a physical function; and until medical men can get that conception in treating mental disease, they are not likely to arrive at any definite conclusions or to obtain definite, intelligent success. We have under consideration in connection with the Northwestern University Medical School the establishment of a psychological laboratory such as Professor Angell has referred to, so that students, after knowing something about the normal action of the brain as manifest in mind, may study intelligently its morbid and abnormal manifestations. This will enable them to grasp the situation and to know the limitations of psychotherapy, and to appreciate what is implied in these various isms, cults and fakes. In this way we may perhaps narrow down the tendency to pseudo-psychotherapy, which is likely for a time to be a great fashion, and at the same time use true psychotherapy wisely and well for the good of those who require it.

Dr. Oscar A. King:—I feel that we are to be congratulated on the remarks of Professor Angell, in that he has brought before us that physiological psychology the public are very little acquainted with. The medical profession have not been very generously treated and politely treated commonly as being possessed of knowledge. They are very frequently sneered at lately for not being entirely scientific. But it was Maudsley, and such men as he, who, long before the universities ceased to teach the old metaphysics, taught physiological psychology and forced it into the universities, and credit is due to medical men and to medical experience for leading the universities into the suitable work they are now doing, and if we are going into psychotherapy from any point of view, we should go into it from the point of view expressed by Professor Angell.

Dr. Church has expressed my sentiments almost completely, but in one respect, it seems to me, he has erred, namely, that all of this fake psychology, all of this rotten psychology, which now imbues the minds of the people of this country, sprang from materialism. I believe that is a mistake. I believe thinking people are going right on in that direction, and, as has been shown by Professor Angell, and others, the mind is the function of the material brain, and through the operations of the mind physiological changes are brought about, and these physiological changes bring about organic change just the same as functional change in time. Let it continue day after day, week after week, and month after month, and organic change comes in consequence. I do not see that it is at all desirable that we, as a profession, should go into partnership with clergymen in the practice of medicine. That is the real point of the question, it seems to me. The kind of psychology clergymen of old possessed is the old-time metaphysics, that has no relation at all to the brain as the seat of the mind, or to the mind as a function of the brain. It is totally apart from it. He is ignorant absolutely upon anatomy, physiology, chemistry, biology, and upon all the sources of information, and ignorant in these long years of the work of the practicing physician of what is necessary to do for those who are sick—men, women and children—and which has been spoken of now as if it were something quite new. Every practitioner of medicine has views on psychology. Every one, long before the name was invented, had a practical psychology. The house-breaker and the policemen have a practical psychology that serves their purpose; and the physician has a psychology that serves his purpose, and although it may be tremendously improved, without doubt, and should be a part of the curriculum of every college, yet it can help us materially in our work. Are we going into partnership with Miss Dowie? Shall we go to Dr. Worcester and make his diagnoses for him, or go to the various followers of Worcester all over the country and make diagnoses for them? Not at all. The physician is the man to make the diagnosis, and when this is done he should begin treatment and keep it up.

I have no objection to psychotherapy in the sense in which Dr. Patrick has referred to it. Not at all. It is excellent; but what I object to is the so-called psychotherapy which consists in lying. (Here Dr. King referred to the testimonial meetings of Christian scientists which he had attended, and at which accounts of remarkable cures said to have been effected were related, but which subsequently, after careful investigation, were proven to be untrue.)

If a patient is lied to; if a patient is fooled, or trained in a false psychology, it is all wrong, and very harmful, and I do not believe we will ever get any benefit by associating in our medical practice with people who are wholly unqualified to practice medicine, who are wholly untrained and unfit for this work, and I hope Chicago will not join Boston in this movement.

Dr. Julius Grinker:—There is not much to be said on the subject of hypnotism, because nowadays there are very few practitioners of medicine who resort to it except in rare instances.

However, I can not let this opportunity pass without taking issue with our distinguished guest, not because of his narration of what is going on in Boston, but because of his misinterpretation of the movement in Chicago and elsewhere, with which he is not familiar. We, as a profession, can not associate with quacks



and can not tolerate quackery in any form, even if practiced by respectable clergymen. Let me prove to you that the practitioners of "religious healing" are quacks. I took the trouble of looking up Webster's definition of a quack, and here it is: A quack is a boaster, one who pretends to skill or knowledge which he does not possess. Here is another definition: A boastful pretender of medical skill; an empiric; an ignorant practitioner. We can not afford to associate with quacks; but Dr. Coriat has shown that the men with whom he works and is associated are psychologists. Are the men with whom Dr. Coriat is associated psychologists of the type of Professor Angell? Not at all. Let me tell you that the man who writes articles on psychotherapy for the *Ladies' Home Journal* is not a psychologist; and I challenge any one to prove to me that Professor Angell or any other scientific psychologist would have the courage, or rather the impudence, to publish the kind of pseudo-psychology as is expounded in that journal. When I read the good man's articles I said this clergyman is following the methods of quacks and should be considered such. If superlatives were not distasteful, I should call him the biggest advertising faith cure quack of to-day.

A word about the Boston Clinic and the demand for it. The class of people who go to this clinic are sensation seekers. There are thousands of people who never visit a physician; but when they read of the miraculous work that is being done in the Church Clinic, when they hear of the mysticism that goes with it, they feel an impulse to go and find out. The leaders of the movement are doing harm by trying to give religion a concrete form in misdirected ways. Why not clothe and feed the hungry rather than confound their poor minds. I even question whether their motives are purely unselfish. Our friend Fallows, ignorant though he is, is quite sincere when he says: "The churches are getting empty, and something must be done." They, the clergy, have been giving their sheep promises of a hereafter, but the people won't take any stock in that. So they have bethought themselves of furnishing something right now. But what is it? It is fit for neither man nor beast and is sure to produce mental dyspepsia, or perhaps "pastoritis," a malady curable only by the pastor who produced it.

Dr. D'Orsay Hecht:—This evening's academic presentation of this interesting topic of psychotherapy has been most entertaining and somewhat instructive to me. I share in a large measure the expressed opinions of Dr. Church, in reference to the theologic side of the question at issue. The eagerness with which the ecclesiasts are embracing a somewhat rationalized form of Christian Science carries with it a conviction that a purely spiritual religion has outlived its usefulness and hence the discontent bred amongst the clergy and church-going public. I have sought to be without bias toward this particular phase of the subject, but it is hardly possible to remain so even after hearing Dr. Coriat's well tempered version of the Emmanuel movement, for, regrettably enough, it fails to satisfy many points that would arise from a reasonable inquiry and is therefore disappointing. Dr. Coriat has told us, for instance, that the Emmanuel movement is being safe-guarded on all sides in Boston, but this was never intended to be a local movement except in its inception. It has from the very first gone far beyond the confines of Boston and with its spread and growth has surely gotten into less scrupulous hands than those of even Worcester and McComb. In this connection I should like to ask a pertinent question. Why did these sponsors of a new cult and their co-workers put themselves so quickly to the task of writing and issuing that wonderful book entitled "Religion and Medicine," which I am told on the best authority has been, to use publishers parlance, the largest seller of the year? I regard its publication as decidedly premature. I do not think that the patients who have come under the tender mercies of the Boston movement have been observed often enough, thoroughly enough or long enough to justify many of the conclusions drawn. Certainly no definite information can be forthcoming as to whether the patients are cured, half cured or their complaints even half understood. Surely one is justified in accepting with a large grain of salt the Emmanuel announcement of the large percentage of alcoholics cured. It should be

gratifying to note that coincident with these extravagant claims certain neurologists of eminence, among them Drs. Putnam and Weir Mitchell, repudiated the movement.

Dr. King's apt references to the gullibility of the public lead me to the reflection that there has ever been and ever will be an enormous disparity between an individual's capacity for credulousness and intelligence. He stated that upon the occasion of a visit to a Christian Science experience meeting he found that the people in the audience appeared to be intelligent. I desire to emphasize that in this instance, as in others of its kind, appearances are not deceitful and no doubt there were present men and women of culture and intelligence. But after some calm and deep reflection I have come to the belief that, parenthetically speaking, one's bump of credulity has absolutely nothing in common with one's bump of intellect. The two never merge. This is the readiest and easiest explanation I can offer for the spectacle of judges, jurists, educators, professors and men of distinction in business affairs going off at a tangent in company with the most illiterate and irresponsible of modern society.

We are prone to look upon Christian Science with contempt and let our attitude end there. We forget at least one great duty we owe the public in permitting these non-medical, mystical organizations deliberately defy our department of public health and so become a menace to the municipality. More than this, we forget our moral duty to that large contingent of the body social, the children, who, under the control of irresponsible parents, have no voice in their destinies, too often become the unwilling victims of Eddyism and similar cults.

I often ask myself the question, will anything of lasting good come out of the several movements that now prevail? I have the feeling that a modicum of good will remain and that even our profession will share directly in it. The handwriting is on the wall, and Professor Angell, in his inimitable way, has clearly outlined it for our better discernment. He has advocated what must surely come to pass right now and not in the far future, namely, courses in normal and abnormal psychology to be given in the medical curriculum. The medical student will then have something of a foundation upon which to build a better understanding of the so-called functional disturbances of the nervous system and the milder psychoses. And out of this more adequate preliminary training will eventually come a finer appreciation of psycho-analysis and a better capacity for psycho-diagnosis.

Dr. Louis A. Derdiger:—I have only a few words to say. In the last five years I took not only the liberty but advantage of visiting a number of these places, as Dr. King has named them, and have taken part in their discussions. If you will go to these meetings, get acquainted with the people, analyze what they are doing, and discuss subjects with them, you will find it is one of the best ways medical men and women can adopt to cure a great many of their mental or moral ailments. I think that will do more towards stopping the various movements, whether they are for the benefit of financial gain, or for the benefit of certain cures. At any rate, it will do more if you become acquainted and make friends among the class of people you are talking about, as I have done and others have done. Then they will come to the medical man and say, "You have reasoned with me. You have pointed out to me that I have been misled, or that I have probably been mistaken as to this idea of cure."

To illustrate: A few years ago I visited a meeting over which \_\_\_\_\_ presided. Among the statements that he made, the one which I recall at present is something like this: He claimed that he could cure every disease known to Science by a certain attitude, and when I asked him to explain what he meant by 'a certain attitude' and what was his *modus operandi*, he replied that all he had to do was to walk into a room feeling that he loved everybody and they would be cured. I asked him what diseases he had cured and how many cases; the answer was that he had cured six cases of appendicitis and a number of cases of tuberculosis. I then asked him if curing a few cases of appendicitis and a number of cases of tuberculosis, all of which I doubted, would be sufficient proof that all cases of tuberculosis could be cured according to his claim. He thought

they could. I then cited medical statistics of the percentage of cases that are incurable and emphasized the fact that, if any person claims to cure all diseases with one remedy or one idea, he is either a big fraud or insane. I further stated that I would be willing to give such testimony were I to be brought into court. This ended the discussion. The result was that a number of the people in the audience came to me and thanked me for the enlightenment on the subject.

Second: At a meeting of the New Thought Federation, one of the psychologists made the statement that he never expected to die, and further stated that he will never be carried to his grave. This was hurled on the audience as a challenge; I accepted the challenge by asking the question of the gentleman, if after he was dead he would not be carried to his grave. He replied that he did not care what became of him after he was dead, which proved to the audience that this man did not know what he was talking about when he made this statement. But on further arguing the subject of death, he said that we never need to die if we know how, psychologically speaking, to prolong our lives. I assured him that, if he would allow me to, I could end his life in a few minutes, in spite of all his psychological protection. Of course the gentleman replied that accidents and violence were not considered, and still maintained that if a person made up his mind not to die, he would live forever.

I could cite a number of similar instances where I took part in discussions in Christian Science meetings, but suffice it to say that the experiences I have had in visiting these places have convinced me that one of the best ways of eradicating erroneous ideas from the minds of the innocent is through education. By that I do not mean over-education. The medical profession at large are inclined to believe that by giving public lectures on medical topics they can counterbalance Eddyism and other similar movements; but my experience in the past ten years, in studying the different movements and reading their literature, has convinced me that it can not be done. These public lectures have not met with great success in arousing interest in these important subjects. If the people could be made to understand the steady advance made by the profession in knowledge and ability to combat disease, and could be led to take a vital interest in the subject of hygiene and the prevention of disease, it is my opinion that Eddyism and all other isms would fall by the wayside.

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## THE PREVENTION AND INHIBITION OF DIFFUSE SUPPURATIVE PERITONITIS.

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No subject in the entire field of clinical surgery is of greater interest to me than this one, because the surgical treatment of peritonitis had only just been introduced at the time I entered my hospital interne service. Directly after this I had an opportunity of observing the hopelessness of surgical treatment of this condition in the clinics abroad, and after my return as chief assistant of the great surgical clinic at Rush Medical College, first under Professor Charles T. Parkes and later under Professor Nicholas Senn, I saw an unusually large number of these cases during a service of seven years. It soon became clear to me that the only hope of ever attaining even a reasonable degree of success in the treatment of this condition must be in prevention and inhibition rather than in the cure of advanced cases.

By carefully preventing contact infection from every source and introducing the plan of removing from the alimentary tract as nearly as possible all of the septic material by giving the patient two ounces of castor oil on the day before the operation in all non-septic cases and by substituting aseptic for antiseptic wound treatment and limiting the operative traumatism to a minimum we succeeded in eliminating post-operative peritonitis entirely as early as the year 1889 in Professor Parkes' clinic.

When we were confronted with existing peritonitis, however, our results were not at all satisfactory. Since that time I have carefully observed my own cases and have carefully studied the writings of other clinicians and have watched the operative work of a very large number of the best surgeons here and abroad. It would be hopeless to review the literature, because in studying my card index I find notes on 141 articles, and this does not contain nearly the entire literature, so I will write down my conclusions and consume the time allotted to me in their discussion. There is nothing original in any of these conclusions, but they are based upon careful study and observation and I believe that they are very safe to follow. Hundreds of practitioners who have carefully followed these principles have confirmed this.

Diffuse suppurative peritonitis can be prevented or inhibited most successfully by observing the following conclusions:

1. A careful physical examination should be made in every case suffering with nausea, vomiting, digestive disturbance, gaseous distention or pain in any portion of the abdomen, so that an early diagnosis can be made and proper treatment can be instituted at once.

2. A diagnosis of chronic appendicitis, gastric or duodenal ulcer or gallstones should be made through a careful study of the history and physical examination and relieved by proper treatment before a perforation is possible.

3. Patients suffering from intestinal obstruction, whether this be due to strangulated hernia, constriction, by bands of adhesions, volvulus, intussusception or kinking of intestine, Meckel's diverticulum, gallstone or carcinoma, should be operated at once, and they should never under any condition receive either cathartics or food by mouth after this condition is even suspected.

4. Gastric lavage should be employed in these cases at once and again immediately before operation, and it is well to leave the stomach tube, preferably the form invented by Kausch, in the stomach to drain out any intestinal fluid which may regurgitate during the operation.

5. Opium in any form should never be given before a diagnosis has been made and never in the presence of any form of peritonitis unless gastric lavage has been made, and the introduction of every form of nourishment and cathartics by mouth is absolutely prohibited. This applies to even the simplest forms of liquids, like beef tea or broth, and also to the use of champagne and other stimulants.



6. This applies quite to the same extent to postoperative treatment.  
7. In military surgery it is most important as a prophylactic measure that soldiers enter the firing line with empty stomach and intestines.

8. Abdominal wounds made during battle with large objects like splinters from shells indicate immediate operation.

9. Abdominal wounds inflicted in battle by small caliber bullets, in the absence of hemorrhage, should be treated by absolute rest; not even water should be given by mouth.

10. An exception should be made in cases which can be in the hands of the operating surgeon with satisfactory assistants and facilities within two hours after the injury. Under these conditions an immediate abdominal section is indicated.

11. Gastric lavage should be made at once in every patient suffering from any form of peritonitis, except from stomach or duodenal perforation, if nausea or vomiting or gaseous distention is present, no matter what other form of treatment may be contemplated.

12. No food of any kind whatever and no cathartics should ever be given by mouth in the presence of peritonitis, no matter what other form of treatment may be contemplated.

13. Even water by mouth should be prohibited until the patient is well on the way to recovery.

14. Instillation of normal salt solution by the drop method by rectum introduced by Professor Murphy is one of the most valuable means of inhibiting peritonitis.

15. In rare cases in which this method can not be employed, the normal salt solution should be given subcutaneously in quantities of 500 to 1,000 c.c.

16. Large enemata, except by the drop method, should never be given in the presence of peritonitis.

17. In order to prevent postoperative peritonitis, it is important never to traumatize the intra-abdominal organs unnecessarily during operation.

18. Much less handling of the intestines is necessary if these are not distended with gas; a condition which can best be secured by giving the patient two ounces of castor oil on the day before the operation, but this should never be given in the presence of even the slightest amount of peritonitis of any form.

19. Gastric lavage following abdominal section often prevents incipient peritonitis from progressing by inhibiting peristalsis; it should always be employed in the presence of nausea or vomiting or gaseous distention.

20. In acute appendicitis the appendix should be removed before the infection has extended beyond the organ. If conclusion No. 1 is adhered to, this can be done in almost every case with almost perfect safety.

21. In chronic appendicitis the organ should be removed before it has an opportunity to cause an acute attack.

22. In acute appendicitis which has been carried through the attack without an operation, it is well to confine the patient absolutely to a liquid diet until his appendix has been removed.

23. In cases of acute appendicitis, either perforative or gangrenous, which have received some form of food or cathartics after the beginning of the attack and are consequently suffering from beginning diffuse peritonitis, gastric lavage, absolute abstinence from food and cathartics by mouth and the instillation of normal salt solution by the drop method by rectum are indicated.

24. This will result in the increase of resistance against infection to such an extent that 98 per cent. of these cases can later be operated with safety.

25. Feeding should be entirely by enemata, preferably consisting of one ounce of a commercial concentrated liquid food dissolved in three ounces of normal salt solution given slowly every three or four hours through a small rubber catheter introduced into the rectum not more than three inches.

26. From ten to thirty drops of deodorized tincture of opium should be added to each rectal feeding until there is no longer any pain.

27. It is important for the general practitioner and the general public to become familiar with the danger of giving any kind of nourishment or cathartics by mouth in the presence of impending peritonitis from any cause.

In reviewing these conclusions I shall be compelled to be extremely brief, because of the limited time allotted to this large subject, and for this reason the abruptness must be overlooked.

#### A CAREFUL AFFILIATION.

*Conclusion 1.*—The incessant discussions of this subject have eliminated a large proportion of the general practitioners who prescribe without examining and consequently the number of cases which are treated for a few days for indigestion, gastralgia and other similar conditions without having a physical examination made is becoming much less.

a. If every patient, however, were subjected to a careful physical examination when a physician is first called, almost every case could be so treated that diffuse suppurative peritonitis would be prevented. In acute appendicitis, the organ could be removed before the infection has extended beyond its walls. (b) In gastric ulcer the perforation could be closed before serious infection could occur. (c) in volvulus, strangulated hernia, constriction of bands by adhesion, the pressure could be relieved before gangrene has occurred. (d) In intussusception, reduction could be accomplished before the intestinal wall would be injured. (e) In gangrene of the gall bladder, the infected area could be eliminated from the general peritoneal cavity. (f) In traumatic perforations of the hollow viscera, these could be closed before extensive leakage has taken place. (g) The same is true in typhoid perforations. So far reaching is this one item that we can never give enough prominence to its importance.

At this point, however, it seems proper to lay especial stress upon a feature which is frequently a cause of marked increase in the extent of peritonitis. I refer to what might be called violent physical examination

of the abdomen. It is a simple matter to force septic material out of a circumscribed area into the surrounding tissues by these manipulations. If these are repeated daily or several times daily, it is quite possible to prevent Nature from confining the infection to a circumscribed area, which would, in turn, facilitate the production of antitoxins.

I have repeatedly seen the temperature rise several degrees after such an examination, especially in acute appendicitis cases. In one instance in which there were four active participants in this diagnostic massage, the temperature increased from 99 F. to above 104 F. and on one day to 105 F., and the pulse from 90 to 150 beats per minute. After this the patient was not again subjected to this abuse and her temperature remained permanently below 100 F.

I would, therefore, insist upon an exceedingly gentle physical examination as a means of preventing or inhibiting peritonitis.

#### DIAGNOSIS IN CHRONIC CASES LIABLE TO RESULT IN PERITONITIS.

*Conclusion 2.*—In reviewing the number of cases of diffuse suppurative peritonitis of non-traumatic origin in one's clinical experience, one fact seems to stand out above all others. In a vast majority of these cases there has existed a condition which could and should have been recognized and safely relieved which is the real cause of the calamity.

#### PROHIBITION OF ALL FORMS OF FOOD AND CATHARTICS IN INTESTINAL OBSTRUCTION.

*Conclusion 3.*—Nothing is more striking than the difference in results after operation of patients suffering from mechanical obstruction of the intestines than there is in the two groups of cases, one treated with and the other without the use of cathartics. Cases of mechanical obstruction of the bowels in which neither cathartics nor food are given by mouth and in which gastric lavage is employed previous to operation have less than one-fourth the mortality of those in which cathartics and some form of nourishment are given by mouth. The pressure from above due to peristaltic action induced by the cathartics seems to force septic material through the intestinal wall causing serious peritoneal infection.

#### GASTRIC LAVAGE BEFORE, DURING AND AFTER OPERATIONS FOR INTESTINAL OBSTRUCTION.

*Conclusion 4.*—The removal of the decomposing gastric and intestinal contents from the stomach by gastric lavage before, during and after operation aids greatly in inhibiting peritonitis. The stomach tube introduced by Kausch is especially useful, because it prevents leakage along the outside of the tube and so prevents inspiration pneumonia.

#### NO OPIUM BEFORE DIAGNOSIS IS MADE.

*Conclusion 5.*—It is so absolutely impossible to make a diagnosis in patients under the influence of opium that even the best and most experienced diagnostician will fail under these conditions. After a diagnosis has been made, opium may be of great value to the patient, but it

is safe only if there is neither food nor mucus in the stomach which is liable to decompose and give rise to septic material which will favor the development or increase the existing peritonitis. It is equally important to remove the stomach contents by gastric lavage and to prohibit even the slightest amount of nourishment by mouth if opium is given in these cases. It is important not to change the proposed treatment because the patient's suffering has been reduced by an anodyne. Many a case that could have been saved is lost because of the apparent improvement due to an opiate.

*Conclusion 6.*—I have no doubt but that much of the benefit of operations in incipient peritonitis comes from the fact that most surgeons have learned not to give nourishment by mouth for some time after operation. Nothing is more useful in improving the postoperative condition of patients suffering from nausea, vomiting or gaseous distention than gastric lavage and subsequent prohibition of food and cathartics by mouth.

#### SOLDIERS SHOULD ENTER FIELD WITH EMPTY STOMACH.

*Conclusions 7, 8, 9 and 10.*—The experiences in the Boer and the Japanese wars have been so striking that these conclusions require no comment.

#### GASTRIC LAVAGE MOST IMPORTANT IN PRESENCE OF NAUSEA, VOMITING OR GASEOUS DISTENTION.

*Conclusion 11.*—Too much stress can not be laid upon this conclusion, because in these cases a great quantity of decomposing substance can be removed from the alimentary canal by this method. This removes an important cause of further trouble, it establishes drainage away from the peritoneum and increases the patient's resistance to a great extent. If normal salt solution at 100 to 110 F. is used in making the lavage, this serves as a valuable stimulant in itself and the patient is not only relieved of the necessity of absorbing products of decomposition from his stomach in large quantities, but he is left in a condition in which elimination of the septic material already absorbed is greatly facilitated by the increased activity of the kidneys and the skin.

#### NEITHER FOOD NOR CATHARTICS BY MOUTH IN PRESENCE OF PERITONITIS.

*Conclusion 12.*—That peristalsis is one of the most active causes in spreading localized peritonitis to all parts of the abdominal cavity has been demonstrated clinically and experimentally in a great number of instances. The introduction of food or cathartics by mouth is followed almost immediately by the occurrence of peristalsis. The observance of this conclusion has done more to reduce my mortality from peritonitis than all other means, with the exception of those indicated by Conclusions 1 and 2.

*Conclusion 13.*—What has been said of Conclusion 12 applies to a less extent to Conclusion 13.



## INSTILLATION OF NORMAL SALT SOLUTION BY RECTUM IS STRONGLY INDICATED.

*Conclusion 14.*—The benefit of this treatment is enormous. It increases the comfort of the patient greatly and supports him while he is producing the necessary antitoxins.

## SUBCUTANEOUS INJECTION OF NORMAL SALT SOLUTION.

*Conclusion 15.*—This method has no advantages not contained in No. 14, except that it can be administered to the few cases that can not retain the normal salt solution by rectum.

## LARGE ENEMATA ARE CONTRAINDICATED.

*Conclusion 16.*—In a few cases I have seen a rupture of a circumscribed appendiceal abscess caused by the use of large enemata and several times dangerous peristalsis. Since the introduction of the slow instillation of large quantities of normal salt solution by rectum, the use of large enemata is even less indicated than formerly.

## GENTLE MANIPULATION DURING OPERATION.

*Conclusion 17.*—The reduction in the postoperative peritonitis is undoubtedly due to a very great extent to the abstaining from needless manipulation of intra-abdominal organs during operation, thus preserving the normal resistance of the peritoneum.

## INTESTINES SHOULD BE EMPTY AT TIME OF OPERATION.

*Conclusion 18.*—This conclusion is self-evident, but it is of sufficient importance to merit especial consideration.

## GASTRIC LAVAGE AFTER OPERATIONS.

*Conclusion 19.*—What has already been said in discussing conclusion No. 4 applies with equal force to this conclusion.

## IMMEDIATE OPERATION IN ACUTE APPENDICITIS.

*Conclusions 20 and 21.*—These conclusions have been universally accepted, and, if carried out universally, they would prevent at least one-half of all cases of peritonitis that now come under our care.

## LIQUID DIET AFTER ACUTE ATTACK OF APPENDICITIS.

*Conclusion 22.*—It may be well to emphasize this conclusion, because in my experience patients who have fully recovered from acute appendicitis without operation or in case of operation in which it was possible only to drain an abscess without removing the diseased appendix, have never had a serious recurrence so long as they confined themselves absolutely to liquid diet, while those who have taken solid food have frequently suffered from serious recurrence. Consequently these patients can be given a choice of two safe plans: exclusive liquid diet or interval operation. The enforcement of the former plan usually results in submission to the latter.

## PROHIBITION OF FOOD AND CATHARTICS IN ACUTE APPENDICITIS.

*Conclusions 23, 24, 25 and 26.*—By following strictly these conclusions in all cases of gangrenous or perforative appendicitis in which the infection had already extended beyond the tissues of the appendix, causing a degree of peritonitis which made an immediate operation unsafe, judging from my previous experience with similar cases, I have been able to reduce my mortality to a little below 2 per cent. in this class of cases in which formerly I had a high mortality. It is my rule to operate upon these cases as soon as a circumscribed abscess forms or when their condition has improved so that an operation appears safe. In case an operation is refused, no nourishment of any kind is given by mouth until the patient has been normal and free from pain for at least four days. Feeding is begun very cautiously with commercial beef tea, then broth, then thin gruel. Milk is not given for some time. Then conclusion No. 22 is brought into use.

## GENERAL PRACTITIONERS AND THE GENERAL PUBLIC SHOULD STOP FEEDING AND PURGING THESE CASES.

*Conclusion 27.*—Whatever one's plan of treatment may be, there can be no doubt but what much benefit would result in the way of prevention and inhibition of peritonitis if this conclusion were generally put in practice.

## THE SEQUELÆ OF ACUTE DIFFUSE SUPPURATIVE PERITONITIS.

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The successful results lately achieved in the treatment of acute diffuse suppurative peritonitis, by the combination of speedy operation, postural drainage, inhibition of peristalsis, and washing the toxins out of the blood with normal salt solution, have given the sequelæ of this disease an importance which did not previously occur. Formerly a very small proportion of our patients were left alive long enough to show the conditions that might follow the disease. But now the number of patients recovering is large, and many have been under observation sufficiently long to study and classify the sequelæ. Most of the cases that recover, recover so completely that they complain of no symptoms which may be considered as resulting from the peritonitis. But a large minority, at least 25 per cent., develop other morbid conditions after the diffuse suppurative peritonitis has been stopped by operation and treatment.

First, localized abdominal abscess is a rather common sequela. A small area either retains the original infection in a latent or encapsulated condition, or else becomes reinfectd from the intestine or blood

stream. The abscess is localized, walled off by adhesions and usually of subacute activity.

Second, Adhesions: Interviscesal.—Whenever there is an insult or injury to any of the peritoneum covered viscera sufficient to displace or disintegrate the delicate endothelial covering, the omnipresent omentum makes an attempt to cover the injured surface by protective adhesions. If parts of abraded viscera lie in close apposition, their surfaces make an attempt to protect each other by plastic adhesion. Adhesions between omentum and viscera and between the viscera themselves do not occur to any extent during the acute suppurative peritonitis, but do occur to a greater or less extent during convalescence after the pus is removed by drainage and the diseased parts lie in contact. These adhesions remain as a sequela for a variable length of time, depending on the amount of abrasion, infection and irritation left over from the peritonitis.

If there is a permanent point of infection or irritation, as a remaining diseased appendix, or a foreign body, as a fecal enterolith, or a sealed-in point of infection, then the adhesions around that point will be permanent, according to the permanency of irritation. Those adhesions that are free from irritation begin to be absorbed and to be pulled apart by peristalsis as soon as their function has ceased; i. e. as soon as the peritoneal surfaces that the adhesions were protecting have healed and become healthy. Patients who have recovered from acute diffuse suppurative peritonitis are usually found to be practically free from interviscesal adhesions in from four to six months. During the period of disintegration and absorption the patient suffers abdominal pain and soreness, due to the stretching and pulling of the interviscesal bands and adhesions.

Third, Intestinal Obstruction: Strangulation.—(a) By bands: An intestine may be caught and strangulated by a band of adhesions or adherent omentum, or may be caught within a loop made by an intestine partially adherent to itself. (b) By twists: An intestine may be obstructed by a twist upon itself, produced by adhesions of the intestine pulling in different directions. (c) By angulation of intestine by construction of omentum adherent to wall of intestine. (d) Cicatricial: The intestine surrounded and infiltrated by granulation tissue becomes obstructed as the granulation tissue undergoes cicatricial contractions, pinching the intestine in from all directions. Adynamic obstruction occurs as a complication of the disease and not as a sequela.

Fourth, fecal fistula follows acute diffuse suppurative peritonitis when: (a) A causative perforation has not been closed or has not healed. (b) The infection has been so severe that a portion of the bowel wall sloughs. (c) The inflamed friable gut has received a mechanical injury at the time of operation, either actual tear, or injury sufficient to produce a slough through the wall of the intestine.

The tendency of a fistula produced by inflammatory or mechanical causes is toward spontaneous closure, if there is a free passage through the gut below the fistula. The intestinal peristalsis tends to straighten out the gut into its natural position, at the same time elongating, nar-

rowing and obstructing the fistulous canal. The surrounding cicatricial tissue tends to contract and close up the opening.

If a large portion of intestinal wall has sloughed, or if the fistula is situated in a part of gut bound by scar and adhesions, so as to locally prevent peristaltic movement or to prevent cicatricial contraction of the opening, then the fistula tends to become permanent. In a fistula produced by a perforation due to malignant disease, tuberculosis, peptic ulcer, syphilis, actinomycosis or any specific infection, the history of the fistula follows the history of the causative disease.

Fifth, tuberculosis of retroperitoneal glands occasionally occurs. In the final cleaning-up process of the abdomen by the lymphatics, the retroperitoneal mediastinal glands become engorged and weakened by septic material and are fertile soil to pick up, arrest and propagate any tubercular bacilli that may have wandered into the peritoneal cavity. Those glands may undergo resolution or break down and simulate psoas abscess.

Sixth, postoperative ventral hernia follows acute diffuse suppurative peritonitis in proportion to the amount of injury to the abdominal wall; to the size of the surgeon's drainage openings; to the length of time of drainage, and to the amount of suppuration in the abdominal wall itself. The tendency to hernia depends largely on the amount of cicatricial tissue left in the abdominal wall. Fortunately the drain wounds are usually small and situated in the fascial lines. They heal quickly with little suppuration and infiltration of the abdominal wall.

Here there is less tendency to postoperative ventral hernia than exists after infected wounds of the abdominal wall or drain wounds for abscesses in the abdominal cavity which require more time in healing by granulation tissue from the bottom. Nearly all of the hernias occur during the first year after drainage and are not nearly as frequent as the statistics on postoperative ventral hernia would lead us to expect.

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## LIVER RESECTION. A REPORT OF FIVE CASES.\*

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There is no intra-abdominal organ, with the exception of the liver, that was not almost beyond conquest through surgical skill until a very few years ago. The surgeon was not timid in undertaking with success any abdominal operation from total extirpation of the rectum to gastrectomy and splenectomy. The liver, on the other hand, was held in abhorrence by every surgeon from the very birth of the surgical art; not that the opportunities for dealing with pathologic conditions were not as numerous as in other abdominal organs, but that great dread of hemorrhage and the important physiologic function of the organ. While some of

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the obstacles to the progress of liver surgery were overcome by Holm, Glück, Ponfic and others to whom we are indebted for the knowledge of the healing and regenerative powers of the organ, the development of a proper modern technic in dealing with the liver in both injuries and resections thereof was still in its infancy, mainly due to the great difficulty in overcoming the problem of hemostasis.

To overcome this only obstacle that still remained in the path of progress, we are indebted to numerous investigators whose experimental and clinical investigations formed the connecting links to the almost perfect chain that forms our present technic of liver surgery. While we are indebted to Kuznutzow, Pensky, Auvray, Clementi and many others whose names have recently been mentioned by various writers on the subject, for their ingenious experimental work, demonstrating the possibility of successfully ligaturing and suturing liver tissue, it remained for Dr. Jacob Frank, of Chicago, to develop a method of incising and suturing the liver whereby the continuity of surface is re-established, insuring perfect hemostasis, thus making the closure of the abdomen safe as after any other clean abdominal operation.

Before citing the cases which I have been able to collect where Frank's method was used, it will be necessary to give a short résumé of the experimental investigations as carried out by the last-named author.

In January, 1905, Dr. Frank presented the results of his experiments before the Pan-American Medical Congress in Panama and published his articles in *The Journal of the American Medical Association*, Aug. 12, 1905. In the sixteen conducted experiments on dogs he pursued the following plan: Supposing a portion of liver is to be resected for a crushed laceration or growth, situated at or near the liver border, he incises the liver on the upper surface in a bevelled manner, commencing at the liver margin on one side of the part to be removed, carrying the incision to the liver margin at the opposite pole. The incision is continued from this point on the under surface in a similar manner up to the point where the incision was commenced, thus encircling the part to be excluded, which leaves two liver flaps, the latter flop together, making their approximation easy without any tension whatsoever. This, owing to the low blood pressure in the portal circulation, does away with the employment of temporary hemostasis. A running thread of medium catgut threaded on a non-cutting needle is now taken and sutured in the following manner: one deep suture and one superficial alternately. All dead space is thus obliterated. Hemostasis is perfect and a new liver border established.

Should the trouble be located a distance away from the liver border, he follows another plan: A wedge-shaped portion of the entire thickness of the liver is first cut out perpendicularly. The two broad surfaces left by the removal of the wedge-shaped portion are now converted into troughs. This is accomplished by the excision of wedge-shaped pieces. The troughs thus formed each have two flaps. These flaps are approxi-

mated with a similar running thread as was done in the first procedure. When the operation is completed the liver remains with a notch and the approximated flaps on either side of this notch form new liver borders. Dr. Frank also emphasizes the fact that if the flaps do not fall into coaptation more tissue should be cut away, as the perfect apposition of the flaps is essential to secure easy hemostasis.

Since the publication of Dr. Frank's experimental work I am able to report five clinical cases on the human where his method was employed, three unpublished cases under personal observation, of which two were operated upon by Dr. Frank and one by myself. Two are published cases which I found on perusing the literature—one by Prof. Garre, of Berlin, Germany, and one by Dr. Wm. Schroeder, of Chicago.

CASE 1.—Operated by Dr. Frank. Mrs. B., aged 54, married, has two children, both well. Family history negative. Personal history: Had muscular rheumatism for several years; she also had gastric trouble on several occasions. We found her greatly emaciated and cachectic, her appetite was poor, bowels sluggish. She complained of constant pain in the epigastric region.

*Examination.*—The right hypochondriac region was tender on pressure. The edge of the liver could be felt distinctly, which was hard, extending a few inches below the costal arch. The case was diagnosed as tumor of the right lobe of liver, probably associated with cholelithiasis. She was sent to the hospital for operation. Nov. 16, 1905, an incision was made through the right rectus muscle, and on opening the peritoneum the following conditions were found: The gall bladder and the edge of the right lobe of the liver were covered with strong omental adhesions. Loosening the latter the gall bladder was found contracted and filled with stones; the edge of the liver at the site of the gall bladder was of a fibrous hardness, simulating carcinoma. The gall bladder, together with the calculi, were removed without opening it. The diseased portion of the liver was excised in a wedge-shaped manner through the healthy liver tissue, according to the first method previously described. The control of hemorrhage was perfect. The removed portion of liver was examined microscopically and proved of benign origin. Patient's recovery was uneventful. She is still in good health and has gained in weight.

CASE 2.—Also operated upon by Dr. Frank. Mrs. G., aged 38. Family history negative. Personal history: Is married, has four healthy children. She has had gastric trouble for many years, with symptoms of vomiting now and then, especially after eating and at times also between meals. She was greatly emaciated.

Examination revealed a large mass in epigastric region which was diagnosed as carcinoma of the pylorus.

Nov. 14, 1906, she was operated. On opening the abdomen, the following condition was found: A large tumor involving one-third of the stomach at the pyloric end. This mass was firmly adherent to and involved the lower part of the liver in that region. In order to commence to liberate the mass, a large wedge shaped portion of the liver was removed, encircling the mass. The flaps were sutured as already described: this completely arrested the bleeding, re-establishing the continuity of liver surface, forming a new border. After this was accomplished we managed to remove part of the stomach and made a gastroenterostomy. The pancreas being also involved in the mass was removed. The abdominal cavity was drained. Patient died the following day.

The reason for reporting this case is to illustrate how a large portion of liver can be removed without temporary hemostasis and the bleeding so nicely controlled.

CASE 3.—Operated upon by the author. Mr. B., aged 54, married. Family history negative. Personal history: He always enjoyed good health until about two months ago, when he took sick with severe stomach cramps, radiating to the shoulder blades. A physician was called, who stopped the pain with a hypodermic of morphia. He also complained of a distressed feeling after eating. He had been jaundiced of late.

*Examination.*—The patient looked icteric and I elicited tenderness over the gall bladder. I sent him to the hospital and on the following day, Dec. 10, 1907, made an incision through the right rectus muscle, and on opening the abdomen I found intestinal adhesions to the liver and gall bladder, which were carefully separated. The gall bladder was contracted, containing many small stones. A cholecystectomy was made. A small white indurated area the size of a walnut existed at the edge of the liver. This was incised, found filled with gall-stones. This pouch, after the gall bladder was removed, was resected through the healthy liver tissue, according to Dr. Frank's method. The abdomen was partly closed and drained. Recovery uneventful.

The only two published cases I succeeded in finding on careful perusal of the literature are one by Prof. Garre and one by Prof. Wm. Schroeder.

CASE 4.—In the September, 1907, issue of the journal of *Surgery, Gynecology and Obstetrics*, Prof. Dr. Garre contributes an article for the "*Senn Festschrift*" entitled "Resection of the Liver," and among his recorded cases I find only one case of real resection in which he employed Dr. Frank's method. This is the first published report on the human where this technique was carried out. No drainage was used. The patient made an uneventful recovery.

CASE 5.—In the Cook County Hospital Reports, 1906, Dr. Wm. E. Schroeder, of Chicago, reports a case of adeno-carcinoma of the liver in a woman, 31 years of age. On entering the abdomen, the tumor was found to be situated in the lower portion of the right lobe of the liver. This was removed in a wedge-shaped manner, leaving anterior and posterior flaps, which were brought together by coaptation cat-gut sutures. The abdomen was closed. Patient recovered. Nine months later the patient died from recurrence of the disease in the general peritoneal cavity.

#### CONCLUSIONS.

1. The removal of large portions of liver is not to be dreaded.
2. Temporary hemostasis is not necessary, as the blood pressure in the portal circulation is low and hepatic vessels can be ligated singly or *en masse*.
3. The possibility of successfully ligaturing and suturing liver tissue is a demonstrated fact.
4. Suturing liver tissue must be accomplished with ease and with the most simple means in the hands of every operator. This is accomplished by Dr. Frank's method.
5. This perfected technic in dealing with liver resection will not only greatly reduce the mortality, but also postoperative complications.

## DIAGNOSIS AND TREATMENT OF EXTRA-UTERINE PREGNANCY.\*

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## DIAGNOSIS.

(a) Rarely is extra-uterine pregnancy diagnosed before the primary rupture of the ectopic sac. In the few instances where such diagnosis has been made, it was accomplished by the early examination of the patient who had missed one menstruation. The diagnosis must then be based upon: First, the cessation of menstruation; second, the ordinary breast signs of pregnancy; third, the lack of menstrual phenomena at the time menstruation should have occurred; fourth, upon physical examination, the discovery of a small tumor which is at one or the other side of a slightly enlarged uterus.

This tumor, on palpation, has an indistinct sense of fluctuation more resisting than hematocele or pyosalpinx, but with less resistance and elasticity than a small cystic ovary. The differentiation must be made between a small cystic ovary, which is usually smooth, regular, movable, hard and extremely elastic; a hematocele, which is soft, boggy, without elasticity and which is rather indefinite in outline, and a pyosalpinx, which is usually adherent, possessing slightly more elasticity than a hematocele, but of a boggy, inelastic feel compared to the cystic ovary. The unruptured ectopic pregnancy will be without adhesions, and lies between the cystic ovary and the pyosalpinx in elasticity and regularity of contour. Hence the difficulty of making a definite decision is extremely great.

(b) As a rule, however, one's attention is not called to these cases at this early period, and it is only at the time of the primary rupture or tubal abortion that a diagnosis occurs. The symptoms of a primary rupture are characterized, first, by a sensation of cutting or tearing low down at the side of the uterus, right or left, in what is known as the ovarian region. This is followed by a sensation of fainting or syncope on the part of the patient, with extreme exhaustion and all the symptoms of shock without hemorrhage, and frequently with severe hemorrhage. The patient is extremely prostrated with subnormal temperature, and if bleeding occurs becomes pale, pulse becomes rapid, surface perspiration occurs and a gasping respiration is noticed frequently with dilatation of the pupils.

These symptoms with their attendant horror should never be overlooked by a careful physician. The symptom is that caused by a rupture of the tube or a forceful expulsion of the pregnancy from the end of the tube, and the pouring into the abdominal cavity of more or less blood, from a small quantity which becomes coagulated and acts as its own

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remedy, to a large quantity which produces extreme prostration and frequently death.

(c) After primary rupture has occurred and the patient has recovered from the shock spontaneously and the fetus has been destroyed, a casting off of the decidua from the uterus occurs. This is usually accompanied by a slight discharge of blood and the decidua appears as shreds nearly always, and occasionally as a more or less complete cast of the body of the uterus. This discharge, taken in conjunction with the passing of one or two menstruations and the other symptoms of pregnancy, are so characteristic that they should make the practitioner immediately suspicious of this dread complication of ectopic pregnancy.

(d) After the primary rupture has occurred and the patient has recovered from the shock, one by bimanual palpation of the pelvis should find a tumor which is more or less characteristic. If the fetus is dead, in which case we will have had the symptoms of discharge of decidua, the tumor will be practically a hematocele, having an irregular outline, extremely inelastic and of a definitely boggy feel. If the decidua is not discharged from the uterus, then we have a right to suspect that the fetus, upon primary rupture, regained an attachment to the maternal parts or retained its placental attachment to the maternal parts and the fetus is growing in its sac. In this case the tumor will be more resistant and more elastic, while it may be surrounded by clotted blood for a time, which will give the impression of same feel as hematocele.

(e) If the fetus retains its attachment to the mother and continues to grow, it soon becomes a well-rounded tumor with a semi-fluctuating feel, resembling much the pregnant uterus, with the uterus palpated and slightly enlarged on one side. The symptoms of pregnancy with the softness of the uterus, and the cessation of menstruation and the breast signs, will be the particular marks of an ectopic tumor. Without these, one may readily mistake it for a soft ovarian cyst or a parovarian cyst. It differs from the ovarian cyst in being less regular in outline, usually possessing adhesions to the surrounding parts and being softer and less elastic in feel.

(f) As the tumor increases in size, still further, the fetal heart sound can be distinguished, when with the definite feel of the normal uterus to the side one should no longer have difficulty in making a diagnosis.

(g) After the recognition of the false labor at the end of the period of gestation without expulsion of the fetus from the uterus, together with the finding of the normal uterus to one side of the tumor, there should be no further doubt as to the diagnosis, especially as the tumor after the false labor decreases quite markedly in size within the next two or three weeks.

#### TREATMENT.

(a) The most imperative rule in the treatment of ectopic pregnancy in the rare cases where an unruptured ectopic gestation is diagnosed is that a laparotomy for its removal should be immediately executed. This advice is so sound that I believe every case in which an unruptured extra-

uterine pregnancy is suspected no chances should be taken, but laparotomy instituted at once. A laparotomy in a well-regulated community is now so safe that one should never be justified in waiting for further developments when a small tumor of the nature of an ectopic sac is discovered in connection with the ordinary symptoms of pregnancy when with reasonable certainty one can exclude normal pregnancy.

Before the abdomen is opened when a condition of this kind is suspected while the patient is under anesthesia, the uterus should be carefully palpated, and if reasonable assurance is obtained by such examination that such pregnancy is not intra-uterine and the tumor on further palpation is of the resistance described under the heading Diagnosis, the operation should be proceeded with.

The extreme difficulty of this early diagnosis, however, is so great that we seldom have an opportunity to operate at this period. Other means of treatment for these early diagnosed cases have been recommended as means less radical. These consist of the use of galvanism, the injection of the sac with antiseptic or poisonous material for the purpose of terminating the life of the fetus or the puncture of the sac with trocar or an aspirating needle with the same idea in view. These methods, while they received some attention in the early days of abdominal surgery, are only mentioned now in order that they may be condemned.

(b) Treatment at the primary rupture. Here, as in the case of unruptured tubal pregnancy, one should be prepared to consider as of first importance immediate laparotomy rather than an expectant treatment. While a certain percentage of these cases will form hematoma and not terminate in death, the risk to the patient is so great of other than a favorable termination occurring that in this day with ordinary hospital facilities obtained almost in a minute, operation should be the treatment of choice. Schauta, after a careful study of the literature, compares the results following operation in 123 cases with those observed in 121 cases treated palliatively, and reported a mortality of 5.7 per cent. in those operated upon and a mortality of 86 per cent. in those in which a waiting policy was pursued.

The main question now is not whether we shall operate, but when is the best time to operate. In cases in which an immediate rupture is diagnosed in which prostration is extreme with subnormal temperature, high pulse, with an operator of ordinary skill, the safest plan would be an immediate operation. These cases, however, come on with such suddenness and at a time when professional attendance does not reach the case immediately, and when a physician reaches the case the severer symptoms have subsided, indicating a cessation of the hemorrhage, that one should hesitate justifiably to operate if evidence of a cessation of the hemorrhage is positive. Extreme quietness, lowering of the patient's head, the application of a tight abdominal bandage with external cold applied and waiting for some recuperative and better operating facilities may appeal to one as good judgment. I have several times postponed operating upon cases brought to the hospital who are in extreme weakness and have been able to operate upon them twenty-four to forty-eight

hours later when the condition had markedly improved. Such cases, of course, are under the closest surveillance and the slightest sign of increased hemorrhage would be the signal for operating.

(c) If prompt diagnosis has not been made and the case is not seen for several days after the primary rupture, if the patient has been constantly improving since the time of the rupture, and by gentle palpation a well-formed hematoma of small size is recognized, an operation may be postponed indefinitely, as such cases have shown their ability to spontaneous cure. It must be remembered, however, that a primary rupture may occur and considerable hematoma form and the fetus still retain its vitality and continue to develop. It is, therefore, necessary to keep such cases under close observation, and when such a termination seems probable, viz.: that the fetus is still growing, then a deliberate operation should be performed for the purpose of removing the sac and the remaining hematoma.

(d) When an operation is decided upon at an immediate rupture, if the patient is in an extreme condition, a rapid operation at her home upon her own bed can be carried out with perfect asepsis and with local anesthesia by an operator of ordinary skill. If the patient shows signs of recuperation and there is an indication that the serious blood loss is at an end, a general anesthesia and a more thorough operation should be done, having for its object not only the stopping of the blood flow, but the removal of the sac and the large blood clots. In these acute cases, however, no great amount of time should be spent in an effort to remove the fluid blood from the abdominal cavity, as a large quantity of blood will be absorbed and cared for by the peritoneum. The object in these cases is to stop the loss of blood and to complete the operation with as little disturbance to the peritoneum as possible and an avoidance of increased shock.

(e) In the treatment of tumor developing with a growing fetus any time after the primary rupture and without hematoma, a deliberate operation should be planned with the idea of removing the tumor entire, or, in case of universal adhesions and a large sac, the removal of the fetus and the placenta, if possible, sewing the edges of the sac to the edge of the womb and packing the sac with a gauze drain. In case the placenta can not be detached without too much hemorrhage, the cord should be brought to the surface and a packing placed firmly in the sac around the placenta until such a time as the blood sinuses are closed and the placenta has become detached. It is very seldom that one is called upon to treat an extra-uterine gestation or an abdominal pregnancy in which the fetus has become viable. If one is called to a case of this description the question to settle immediately is the importance of saving the child in comparison with the risk additional waiting may be to the life of the mother. An abdominal pregnancy that has developed to the fifth or sixth month is liable to go on to term, but the chances of a rupture at this time are so great and the almost certain fatal disaster to the mother should a rupture occur, at this period, that one should, except under extreme circumstances, decide in favor of an immediate operation without reference to the possibility of saving the child. No other course

should be pursued unless the patient were in a hospital in care of a nurse and under the closest supervision in order that an operation under the most favorable circumstances might be performed immediately at the first indication of danger. The method of procedure in the case of a viable abdominal pregnancy after opening the abdomen is to open the sac at a point free from important adhesions, remove the fetus rapidly, as in the case of Cesarean section, and the placenta, if its removal is not difficult. It must be remembered here, however, that, unlike a Cesarean section, the placenta is attached to tissue other than the interior of the uterus and tissue which can not contract and which in all probability would pour out an enormous flow of blood if an attempt to remove it were made. For that reason the sac should be attached to the abdominal wall and the whole packed with gauze until such a time as the blood channels have closed and the placenta can be removed. It is rarely that adhesions are so slight in these cases that the sac can be removed.

(f) The treatment of the extra-uterine sac after the false labor has occurred and the fetus has died should consist in allowing the sac to remain quiescent for one or two months until the placental sinuses have closed and until the placental and other circulation to the interior of the sac has thoroughly terminated. The tumor should then be treated as an ordinary tumor in the peritoneal cavity, removed if possible in its entirety by careful ligation of the ovarian artery, enucleation from the broad ligaments and finally ligation of the uterine artery, and, if necessary, ligation of the horn of the uterus to care for recurrent circulation at that point, the tumor otherwise being treated much in the same way that one would enucleate a large parovarian cyst. In case the tumor has formed strong adhesions to the intestines, the omentum and other important structures, the procedure should be to incise the cyst, evacuate its contents, attach its edges to the abdominal wall, and drain with a gauze drain.

There is no subject in abdominal surgery that tries the judgment of the surgeon so much as the treatment of ectopic pregnancy. It requires heroism to do an emergency operation with limited facilities upon a dying woman. A little hesitation, a seeking for a little further sharing of responsibility, makes the difference between a mortality of 5 per cent. and 86 per cent.

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### THE BLOOD PRESSURE IN CHRONIC INTERSTITIAL NEPHRITIS, WITH SPECIAL REFERENCE TO TREATMENT OF THE SAME.\*

GEORGE W. PARKER, PH.B., M.D.  
PEORIA, ILL.

In discussing the blood pressure in chronic indurative nephritis I shall confine my remarks to the so-called genuine chronic interstitial type and not consider the changes in secondary interstitial nephritis or arterio-

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\* Read before the Military Tract Medical Association.



sclerotic kidney, although the arterial tension in these types shows similar changes, yet it is not identical in all the stages.

Chronic interstitial nephritis may be divided into two phases clinically—the first characterized solely by abnormalities in the urine and the second by typical cardiovascular symptoms. The blood pressure during this first stage is normal in the vast majority of cases, unless there is some other etiological factor present other than the nephritis.

The blood pressure being normal in this stage, no direct treatment is indicated, but prophylaxis should be instituted. The prophylactic treatment resolves itself into the treatment of the condition which ultimately produces blood-pressure changes, namely, the first clinical stage of interstitial nephritis. It is very difficult to commence treatment early, as the disease is very insidious in its onset and gives rise to no subjective symptoms for a considerable period of time. For many months or even years objective signs only are present. Albuminuria is the first sign and this is frequently intermittent. It may not be present in the morning urine at all. Patients, as a rule, never consult a physician at this time unless for some intercurrent disease. Albumin is usually found by accident, for example, during an insurance examination. There are, however, a number of people who consult a physician once a year for a complete physical examination. I believe the number is gradually increasing and that it is the physician's duty to instruct people that it is just as necessary to examine the body thoroughly once a year as it is to inspect an elevator or to have a dentist examine the teeth. Examination of the heart, lungs, blood pressure, urine and bodily nutrition should receive special attention. This yearly inspection is more necessary after the age of forty.

When albuminuria is found it should be closely watched. If not treated it becomes more marked and persistent, and a few hyaline casts may appear. Then there is a slight increase in urine and frequent micturition, especially at night. At this point the patient's rest is disturbed and the physician is consulted. A diagnosis can now usually be made and the condition treated along lines familiar to all. This treatment will constitute the prophylaxis of the blood-pressure changes which are soon to come. Many cases properly treated in these early stages may subside and no further changes take place in the kidney. If the condition is not treated, the changes in the kidney progress and cardiovascular changes appear, one stage gradually merging into another.

We now begin to get an increase in arterial tension which advances slowly until the disease is at its height, when we have the typical picture of chronic interstitial nephritis with cardiac hypertrophy and high blood pressure. A high pressure is very characteristic of interstitial nephritis, and many theories have been brought forward to explain the mechanism of its production.

One of the oldest, and Broadbent thinks a reasonable explanation, is that poisonous products are retained in the blood as the result of imperfect elimination by the kidneys and that these act as an irritant on the walls of the capillaries and arterioles, setting up a reflex spasm or hypertonic condition of their walls, thus creating increased peripheral resist-

ance and rise in blood pressure. This theory does not explain the condition fully, as in chronic interstitial nephritis there is less retention of metabolic waste products than in other forms of nephritis and the blood pressure is higher.

Traube's mechanical theory has been disproven by the experimental fact that ligation of the abdominal aorta just above the renal arteries does not raise blood pressure. Hirsch and Beck disproved the theory of increased viscosity of the blood. Loeb, in 1905, pointed out the fact that high blood pressure and cardiac hypertrophy are seen in those types of nephritis in which the glomeruli are extensively diseased. He argues that the increased blood pressure may be brought about reflexly through the vasomotor system, and that the peripheral stimulus is to be sought in the vascular changes in the glomeruli. Janeway believes this to be the most probable explanation.

Tigerstedt and Bergman have shown experimentally that fresh kidney substance, especially the cortex, is capable of causing a rise in blood pressure. They were not able to isolate the actual substance responsible for this effect. We have clinically what may be substantiating evidence of these experiments, namely, a high blood pressure following a great reduction of the cortex in chronic interstitial nephritis. We may say, then, that we have clinical and experimental observation in support of the view that maintained hypertension may be due to the entrance of kidney substance into the circulation.

The number of theories advanced and still held by certain observers is proof sufficient that the problem of high arterial tension in interstitial nephritis is not yet definitely solved. At present, however, there is a general tendency to look upon it as a compensatory manifestation. We know that the functional activity of the kidney is dependent on the amount of blood flowing through the glomeruli in a given time, and when these are diseased, as in chronic interstitial nephritis, they must offer resistance to the flow of blood. On account of these pathological changes, local vasodilatation can not take place, and in order that the functions of the kidney may be carried on there must be an increase in blood pressure. In view of this fact, it would seem that the high blood pressure is at least compensatory in its effect.

A patient, then, with chronic interstitial nephritis will have better health when the arterial tension is above normal, and this view should form the basis of our present-day treatment. This conception, however, is not universal, as Cook, in *The Journal of the American Medical Association*, for Feb. 28, 1908, says that "indications for vasodilatation in Bright's disease depend on the actual demonstration of high arterial tension by the sphygmomanometer."

The question may now be raised, that if high tension is a pathological necessity, should any treatment at all be instituted? Several years ago I treated the high arterial tension in interstitial nephritis by trying to reduce it. I found out that vasodilators were only transitory in their effects and that very frequently patients developed mild uremic symptoms under this treatment. I feel confident that great harm has been

done because of the too vigorous use of vasodilators and cardiac depressants. My attention was directed more strongly to this point when I found some cases where it seemed impossible to reduce the tension of the pulse, and the patients got along much better.

It is of great importance, however, to control those factors which would tend to increase an already high blood pressure above the point of the so-called pathological normal. This pathological normal wears out the heart and arteries soon enough without any additional hardship being thrust upon them. Overeating, excessive or unusual physical or mental work, straining at stool, excessive use of alcohol and tobacco should all be avoided. Diet, occupation and hygienic conditions should be favorable to the existing nephritis and not stimulating to the circulatory organs. The proper amount of rest, baths and mercurial purges will help to keep down the occasional rises of blood pressure with which we meet even in health and which might cause an apoplectic seizure when added to the already high blood pressure of interstitial nephritis.

If we knew exactly what the blood pressure for any given case should be, that is, the height necessary to carry on compensatory excretion, the treatment would be easier, but this, of course, varies with the individual case. There are, however, certain emergencies which arise that demand lowering of the blood pressure. Among these are the anginal attacks following exertion; nasal and brain hemorrhages and uremia. In the first three conditions, nitroglycerin in full doses will often do good work, especially in the anginal attacks and in the nasal hemorrhages. In uremia, venesection acts well, as it removes the toxins, and this is more necessary than blood-pressure reduction. Although reduction of blood pressure is also necessary, as it often becomes enormously high. These extreme high pressures are often more than compensatory and are liable to cause hemorrhage and heart dilatation.

Besides the emergencies, there are certain other subjective symptoms which are often relieved by vasodilators and other means of lowering pressure, as sweats and purges. I refer to palpitation, vertigo, ringing in ears, attacks of oppression in chest and headache. Sodium iodid and sodium nitrite or nitroglycerin may be used in these cases until the patient is free from the symptoms, and then discontinued.

There are two other conditions where excessive blood pressure should be closely watched and reduced if possible. The first is where we have a mitral lesion complicating the nephritis, and the second where peripheral arteries show calcareous deposits. In the first condition we aim to guard against heart incompetency, and in the second against hemorrhages. To be able to judge in these cases just what height of blood pressure is dangerous can only be done after considerable study of the case in hand.

There are certain conditions which arise in the course of an indurative nephritis that call for remedies which raise the blood pressure. I refer to the beginning incompetency of the heart which terminates many of these cases. A fall in blood pressure, especially if persistent, will point to this condition. Other signs which are always of great assistance in predicting an on-coming broken compensation with lowered blood pres-

sure are, first, prolongation of the interval between the first and second heart sound at the apex, the systole requiring more time to complete itself; second, reduplication of the first sound due to want of synchronism between the two ventricles in the act of contraction; third, weakening of the first sound of the heart at the apex. Digitalis is the remedy par excellence in treating this stage. It should be commenced as soon as we find signs of heart weakening or the blood pressure falling.

The action of digitalis at this time is often as gratifying as it is in mitral incompetency. The heart is stimulated, the blood pressure raised, the kidney excretion increased, and the patient may get around again, the heart becoming compensated and the blood pressure high. The preparation of digitalis which gives the best results is the infusion freshly made from leaves of the second year's growth, properly gathered and kept absolutely in the dark and free from moisture.

#### SUMMARY.

1. The early stage of chronic interstitial nephritis is characterized by urinary changes and normal blood pressure. Direct treatment of the nephritis in this stage is the prophylactic treatment of the high blood pressure and cardiovascular changes which follow.

2. The well-developed stage of chronic interstitial nephritis is characterized by high arterial tension and cardiovascular changes. The cause of the high arterial tension is as yet not definitely proven, but it is probably compensatory in its effect.

3. Efforts are made to lower the high tension, first, when emergencies arise; second, when patients suffer subjective distress; third, when harm is being done in the presence of mitral disease or where marked calcification of the arteries exists.

4. When the pressure becomes lowered and the heart shows signs of weakening, digitalis is the remedy par excellence.

ILLINOIS STATE MEDICAL SOCIETY

ANNUAL SESSION

MAY 18, 19, 20, 1909

QUINCY, - - - ILLINOIS



# ILLINOIS MEDICAL JOURNAL

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## SENATE BILL 448.

A good bill for the reorganization of the state charities is now squarely before the Illinois General Assembly. It has come out of the caldron of unrest that has bubbled and seethed for half a generation. It is Senate Bill 448.

As a prize awarded to the long-suffering people of Illinois the Senate Committee on Charitable, Penal and Reformatory Institutions, without a negative vote, has prepared, reported out and recommended the passage of this high-grade bill for the reorganization of the state charitable, penal and correctional institutions. After the tempestuous experiences, particularly of the last three years, there now comes officially into the open a measure which, in our judgment, merits and should receive the aggressive support of all persons in our state having at heart permanently improved conditions surrounding the unfortunates who are the wards of the commonwealth. The bill prepared by the Senate Committee is drafted to provide means for completing and placing on a firm foundation the humane and efficient equipment and service developed by Governor Dencen and the State Board of Charities, headed by Dr. Frank Billings.

From the very nature of our medical profession we are the guardians of the medical, nervous and physical defectives for whom the state pro-

vides treatment, care and correction. We, therefore, should at once let the intelligent and courageous Senate Committee know that its action is backed solidly by the organized physicians of the state. That the members of the Illinois State Medical Society may have before them the names of the Senators on the Committee of Charitable, Penal and Reformatory Institutions, we print them here:

Hay, Chairman.	Hurburgh,	Potter.
Barr,	Jones,	Stewart,
Billings,	Juul,	Broderick,
Curtis,	Landee,	Burton.
Dailey,	Lish.	Hearn.
Dunlap,	McElvain.	Jandus,
Funk,	McKenzie,	Manny.
Henson,	Pemberton,	Womack (a physician).

It is our duty to explain the excellent features of Bill 448 to those members of the Forty-sixth General Assembly who, because of their long training in politics, are honestly opposed to what we physicians consider vital points of this bill. We should urge such members to lay aside politics, from this time, in all matters pertaining to the treatment, care and correction of the wards of the state.

*Secret, selfish political opposition is the one great peril this excellent measure faces.*

Senate Bill 448 is a combination of the best features of the bill introduced by Senator Logan Hay, for the State Board of Charities; of the bill introduced by Senator John McKenzie, for the Senate special committee, and of the bill introduced by Senator Walter I. Manny, of the House Investigating Committee of last year. The Senate Committee bill has been drafted and approved by Republicans and Democrats. Its features, save one, which is a matter for argument, are the best that the best men in the specialties affected could devise.

The important features of this bill are these:

It provides for a Board of Administration of five men, who are to have power to administer the affairs of the twenty state charitable, penal and correctional institutions and who are to be held strictly responsible for such administration.

It provides an alienist to advise the Board regarding the care and treatment of the insane, feeble minded and epileptic; a penologist, to advise the Board regarding the care, correction and education of prisoners; an expert to advise the Board regarding general charities and the care and treatment of dependent, delinquent and neglected children; a business man to advise the Board regarding fiscal administration; and a fifth man who is qualified to be the President of the Board and in touch with all its activities.

It provides that the members of this board shall reside in Springfield and devote all their time to the State's business.

It provides that the members of this Board shall serve during good behavior, but they can be removed by the Governor at any time for cause, which must be stated in writing and submitted to the Senate.

*It provides salaries of \$7,500 each per annum to attract high grade men into the service; and this provision, with the provision for tenure of office during good behavior, will, we believe, give the State men of a high grade who could be secured in no other way.*

It provides for an extension of civil service to the prisons and reformatory, not now under civil service, and exempts only the superintendents and wardens. Some people argue that the superintendents and wardens should be under civil service; some, that they should not be. Others state that with a non-political Board of Administration, as provided in the bill, appointing and discharging superintendents and wardens, they virtually are under civil service.

*It provides for the continuation and expansion of the excellent hospital service, especially in the insane group, established by Governor Deneen and the present State Board of Charities, a service which has demonstrated its value at home, has attracted wide attention and endorsement in other American States and has been praised in Europe.*

It provides a system of business administration, in specific detail, prepared by successful business men, to avoid graft by every known device and to bring about a centralized, economical administration.

It provides for the separation of hardened criminals from first or slight offenders against the criminal statutes and for the separation of youths, who have come into contact with the criminal law, from men in both of the other classes described in this paragraph.

It provides for an extended service of visitation of dependent children placed in family homes.

It provides, over all the administrative service, for a distinct and separate system of inspection, criticism, and recommendation by a Charities and Corrections Commission of non-salaried persons, by local visitors (one a woman) to each State charitable, penal and correctional institution, and, preserved in the present law, by county visitors to each county almshouse and jail.

THE JOURNAL considers this bill to be the most noteworthy piece of legislative and administrative science ever developed in America for a charitable and correctional service. It offers no large untried experiments, but rather presents a combination in one measure of systems that have been tried out, partly in Illinois and partly in other states. It is placed fairly and squarely before the legislature, whose members now are alert to learn the wishes of their constituents regarding its fate.

We believe it is the duty of every physician in the State of Illinois, if he approves the provisions of this bill (and what true physician will not), to at once write to his district members in the Senate and the House to work for and vote for the passage of Senate Bill 448.

The legislature faces one of its greatest problems. It is for the people of the state, whom the legislature represents, to speak out in a loud voice and to decide whether Senate Bill 448 is to be enacted into law, to the improvement of the condition of thousands of wards of the state, present and prospective, and to the greater comfort of tens of thousands of their relatives and friends; or is to be cast upon the huge scrap heap back of the State House in Springfield.

THE JOURNAL is in favor of the passage of the bill, without amendment to impair its efficiency. There are nearly 10,000 doctors in Illinois. Nearly 6,000 of them are members of the Illinois State Medical Society and take THE JOURNAL. Now is the time for this organized non-political force to exert its tremendous power. Six thousand letters to members of the legislature from six thousand family physicians should pass Senate Bill 448. Will the organized doctors of Illinois write them? We urge them to. We believe they will.

## IMPORTANT MEDICAL LEGISLATION—REVOCATION OF LICENSES, ETC.

House Bill No. 535, introduced at the instigation of the State Board of Health.

This Bill amends the practice act so that the Board may revoke licenses issued to physicians prior to 1899. Under the present law the Board may revoke licenses issued since that date but those secured before 1899 can not be touched. The board asks to have power to revoke all licenses for the same causes it may revoke licenses issued since 1899.

Under the provisions of the Bill the Board has the power to refuse license to persons "who have by false or fraudulent representation obtained or sought to obtain money or any other thing of value, or who advertise under names other than their own, or for any other unprofessional or dishonorable conduct," and the board has power to revoke any license issued since 1877, if it sees fit to do so.

The Board in the Bill also asks for power over itinerant vendors of medicines. The itinerant sale of medicines would be illegal unless accompanied by certificate or permit from the State Board of Health. The definition of vendor as used in this act is as follows:

An itinerant vendor within the meaning of this act shall include any person who, acting either as principle or agent, shall peddle, vend, sell, take orders for or give away any drug nostrum, ointment or appliance of any kind intended for the treatment of disease, or injury, from place to place, house to house, in public places, or on any public street. Any itinerant vendor who shall do any of the acts described in this section without a license from the State Board of Health authorizing him or her so to do, shall be deemed guilty of a violation of this section, and upon conviction shall be subjected to the penalties provided.

The Bill is a step in the campaign against deceitful and fraudulent advertising by physicians and surgeons and if enacted it will give us an opportunity to go after the advertisers who are deceiving the people not only in their advertisements but otherwise.

A bill to remedy the defects in the laws was prepared by the State Board of Health in 1907, and introduced into the General Assembly. This Bill passed the House, but was so amended in the Senate as to leave matters as they were prior to the introduction of the bill.

The present conditions of affairs is intolerable. The authority of the State Board of Health should be uniform in its application to all practitioners, regardless of the date of their licenses. As matters now stand, the State Board of Health is unable to protect the people from the imposition of frauds, quacks, charlatans and imposters, and the Board is rendered impotent in what was intended to be one of its most important functions, e. g., "to detect quacks, and to prevent them and all ignorant pretenders from imposing upon the sick and helpless"—Potts vs. Breen 167. Ill., 67.



The above Bill is deserving of approval and support of every legitimate practitioner in the State and should receive official mention in the official organ of both the Chicago Medical Society and of the Illinois State Medical Society.

CHAS. J. WHALEN, M.D.

Chairman Public Relations Committee, Chicago Medical Society.

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## TWO ARTICLES FROM THE DRUGGISTS' JOURNAL OF CHICAGO.

*Political Antitoxin, or What?* Druggists of the State of Illinois have it in their power to do a valuable service for legitimate pharmacy within the next few days.

The State Board of Health has asked for an appropriation of \$23,000 with which to supply free diphtheria antitoxin to every person in Illinois, including the residents of Lake Shore Drive and Drexel Boulevard. Should this appropriation be granted, we druggists in each county, or two druggists in a few of the more populous counties, will act as the political distributors for this free antitoxin, the State of Illinois reimbursing them.

*Notes* likes to see druggists interest themselves in politics in a legitimate way. In fact, we consider it necessary for them to do so. But they should only do so when the object sought is a betterment of each and every druggist's condition, and should always stand against class legislation for a few.

*All Druggists Should Help.* If free antitoxin is to be distributed, and it should be for the benefit of all indigent persons, why can not every druggist in the state have a hand in it? Why must only one or two druggists in a county do the distributing? Why should some poor families travel fifteen or even twenty miles to procure free antitoxin?

While most families are willing to pay \$5 and even \$10 or \$15 for their antitoxin if need be, why should the poor undergo such hardships as is proposed to procure theirs free?

Is that just and fair legislation? Most assuredly not. We had almost believed that the day was over when any man or set of men would traffic for gain in the misfortunes of the sick, and with the poor sick at that, but it appears that this humane era has not yet dawned.

We would, therefore, urge upon every druggist in the State of Illinois to write or telegraph his representative at Springfield, in order that these representatives may demand the repeal of this appropriation from the members of the Appropriation Committees of the two houses.

*A Guaranty.* The house of Mulford, as we learn from its Chicago representative, Mr. R. L. Deer, has guaranteed that the antitoxin needed for indigents of the State of Illinois for one year will not cost more than the lump sum of \$5,000, and is willing to bind itself to supply it at that figure.

Mr. Deer will appear before the Committee on Appropriations this Thursday (April 15); Representative Naylor is a leader in this move to

defeat the appropriation, and Representative Erby, of Chicago, is also championing the druggists' side of the controversy.

The only sensible method of distributing antitoxin free to the poor is for every drug store in the state to have an authority for doing it, and, as every druggist already handles antitoxin, it would appear a matter of policy and good business sense to accept the offer of the Mulford people, whereby each druggist becomes, automatically, an agent to this end.

*Active Work Needed.* Now, Illinois druggists, *act at once!* Dr. Egan and the State Board of Health politicians are working overtime to pull off this \$23,000 appropriation, \$18,000 of which looks as much like political graft as anything we ever saw. It is an injustice to the drug trade and a fraud upon the taxpayers.

Communicate with your representative and senator *to-day*. Address him at the Capitol, Springfield.

*\$5,000 or \$23,000, Which?*

The Mulford proposition submitted to the State Board of Health and Finance Committees of the Legislature should be accepted. This firm offers to supply the indigent of the state with diphtheric antitoxin for one year for \$5,000 against an appropriation of \$23,000 asked for by Dr. Egan and his friends.

If the Mulford or some similar proposition is not accepted, or if in spite of the offer made by the Mulford Company the Legislature goes ahead and spends needlessly \$18,000 of the people's money, what is the logical deduction?

Would the public not be warranted in assuming that either political or monetary GRAFT was at the bottom of the transaction—especially when we consider that the state government is notoriously hard up, the legitimate demands from nearly every department being largely in excess of the available revenue?

Under the Mulford plan, antitoxin will be distributed by all druggists, and not by a few who have "pulls" with certain well-connected politicians. This will give the people who need the state's aid prompt service and no doubt be the means of saving the lives of some patients who may be ten miles' distant from a distributing agent of the present régime.

Under the deal proposed by the Mulford people, the druggist is not asked to work for the state for nothing, but is allowed a 10 per cent. discount off the price regularly charged for Board of Health antitoxin.

President Yeomans is in receipt of a letter from the H. K. Mulford Company, giving complete details of the proposed plan. *Let each druggist write his senator and representative at Springfield, urging them to adopt the \$5,000 proposition.*

## HOW DR. GEORGE H. SIMMONS IS REGARDED IN OTHER STATES.

*From the Journal of the Minnesota Medical Association.*

### THE LAST STAND.

The recent receipt of what purports to be a reproduction of an advertisement from the *Nebraska Medical Journal*, containing material unfavorable to Dr. Simmons, the Secretary of the American Medical Association, shows to what extent the enemies of the present policy of the Association are willing to carry their opposition. It is quite in keeping with their method that this communication should appear without signature, but it requires no great stretch of imagination, and we doubt if we are doing injustice to any one in laying it at the door of certain proprietary manufacturers of this country. Having failed in their attempt to gain control of the Association, and having failed to throw discredit on the work of the Council on Pharmacy and Chemistry, they now apparently set out to try and blacken the character of Dr. Simmons. It is evidently their thought that if Dr. Simmons can be displaced his successor will be more lenient toward the manufacturers of their class of goods.

Whether Dr. Simmons, as a private physician, lived fully up to the standard which the Association now sets for its members we do not know, but certainly, if anxious to ascertain the truth, we are not likely to go to men using such methods as the above to learn it. As to his public record as Secretary of the Association, however, the members of the profession are very well informed, and we doubt very much if anything his enemies can say will for one moment obscure the fact that, under him as executive officer, the Association has advanced in every way to an almost phenomenal degree. We feel safe in asserting that in everything that pertains to the good of the medical profession in the United States Dr. Simmons has been a leader, as well as a most efficient executive officer, and this latest attempt at personal abuse is not likely to further the cause of its authors. Until the Association has seen cause to be dissatisfied with the growth numerically, as a unified organization, and as a force for good in everything that pertains to its highest welfare, Dr. Simmons is likely to be retained as long as he is willing to grant his services.

*From the Journal of the Indiana State Medical Association.*

The animus of the attacks made on the A. M. A. and its *Journal*, and those who have been instrumental in broadening and elevating the sphere of usefulness of the Association, is easy to understand and explain. The opposition arises purely because the Association has made progress and raised the standard of honesty in things medical. The opposition comes from interests that would prostitute the American medical profession to commercial ends. The establishment and work of the Council on Pharmacy and Chemistry has been the means of incurring the displeasure and enmity of a whole lot of dishonest pharmaceutical manufacturers and their friends who, until their methods were ex-

posed, have profited at the expense of the medical profession and the suffering public. If you hit a dog with a brick he is going to howl, and the more he is hurt the longer and louder he will howl. The enemies of the American Medical Association have been hit hard when they were forced to be honest, and quite naturally they are howling, long and loud. But the cause is understood, and right-thinking physicians will pay no attention to the howl.

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#### THE ATTACK ON DR. GEORGE H. SIMMONS.

After ten years of service as secretary of the American Medical Association and editor of its journal, Dr. George H. Simmons is denounced as altogether unfit for the position he occupies. Why unfit? Not because of any form of misconduct as secretary and editor, but by reason of shortcomings as a physician long before his appointment as such. It is charged that Dr. Simmons is unfit to continue in the position because he, soon after graduation from Hahnemann Medical College of Chicago in 1882, became associated with a sanitarium in Lincoln, Nebraska, that advertised itself, and because, in 1886 and 1887 or thereabouts, he inserted advertisements in a Lincoln newspaper. Furthermore, that he is unfit because of alleged irregularities on his part in connection with his graduation from Rush Medical College in 1892, a charge that can be refuted by the records of the college. Immediately after receiving his degree from Rush Medical College, Dr. Simmons was elected a member of the Lincoln Medical Society and the Nebraska State Medical Society, showing conclusively, whatever is claimed to the contrary notwithstanding, that he was in thoroughly good standing with his fellow practitioners, the very men that now protest vehemently against this attack as unwarranted and thoroughly unjust.

In view of the simple facts, the so-called charges of the enraged pamphleteers fall flat. It is ridiculous nonsense to claim that the actions he has seen fit to denounce have a sinister effect on Dr. Simmons' qualifications as editor and secretary and on his standing in the profession. The great development of the American Medical Association during the past ten years in all its activities, organizational, educational and journalistic, show as nothing else can show the peculiar fitness and ability of Dr. Simmons for this work. During the ten years he has been editor and secretary he has achieved a truly remarkable success and accomplished great things. Who denies that? And who better fitted by virtue of proven ability and training to continue as one of the leaders in the great onward movement of an organized profession than George H. Simmons?

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#### CHRISTIAN SCIENCE A DANGEROUS FRAUD.

In this issue of *THE JOURNAL* will be found several articles on the religious therapeutic movement brought into existence by religious enthusiasts, notably Dowie and Mrs. Mary B. Glover Eddy and which have engaged the attention of society for the past decade. In view of the publication of these papers we insert herewith a strong statement



on the subject by the Rev. Johnston Myers, of Chicago, which takes up the subject from the theological view-point, and complements in a way the professional statements found in our columns.

The time has come when some one must call attention to the immoral and dangerous character of Christian Science. People have believed its untruths and have been led into it without realizing its real character. This article is written in the interests of truth and safety. The writer has studied the subject carefully and has had a large experience with the failures of Christian Science. The strange thing is that moral and kind-hearted people should tolerate it.

It is founded upon a lie. Mrs. Eddy, by her own confession, was a student and patient of Dr. Quimby. She received the whole system from him. Her own confession, made in earlier years, statements made over her own signature, and authentic history makes this a certainty. Yet to-day, for commercial purposes and in order that she may have honor which does not belong to her, Mrs. Eddy denies ever having received Christian Science from Dr. Quimby. The system starts with that lie. The patient is taught to lie to himself by saying, even when he is suffering, that all is well and that there is no such thing as sickness. He must lie or he can not be a good Christian Science patient. His friends are encouraged to tell him that he is well or progressing toward health, no matter what his condition may be. And they are taught to lie. The Christian Science healer begins by lying to the patient. No matter what the suffering may be, he or she affirms that there is no such thing as suffering. In the Christian Science meetings there are more falsehoods told than at any other public gathering. Cures are boasted of which have never taken place. One speaker encourages the other in telling falsehoods. Each one tries to outdo the other in telling of some supposed illness which has been cured. No mention is made of the fact that Christian Scientists are being treated every day in our hospitals and by physicians. Not a word is said about the multitude of failures. Weak-minded people who are suffering hear these false statements and misrepresentations and are led by them into the acceptance of Christian Science doctrines. There are a multitude of instances all about us where people are either dead or dying who have been announced in Christian Science meetings as cured. Thus the whole system is advanced by means of these falsehoods. Many of them must be known to the people who utter them. As one of many examples, it is stated that a Christian Science healer said she broke her arm in two places. She went to her own room and treated herself and was cured without the aid of a physician or any remedies. The people who lived in the family knew nothing of the incident. Another Christian Science healer was confined to her bed for several days and had a nurse and took medicine, and yet publicly declared that ever since she had adopted Christian Science she had not been ill a moment. These are merely samples of the stories which are told. The growth of Christian Science is due to the fact that people believe these untruths. It educates the children to hypocrisy and lying.

The most dangerous feature of Christian Science, however, is in the fact that the patients who are advised to abandon all material remedies are soon in a condition where the physician and the medicine can not help them. They buoy themselves up with this false hope. They declare that they are well. They have had it impressed upon their mind that there is no such thing as illness. They keep deceiving themselves by affirming that they are well. The disease continues its ravages and soon the patient is beyond the reach of human aid. The writer of this article knows of many such instances. He can give street and number and name. They have died because they accepted the falsehoods of Christian Science and abandoned the reasonable remedies. The first person ever to leave Immanuel Church for Christian Science did so in order that she might be cured of her illness. She proclaimed to the world that she was well. She ridiculed the physician and the remedies. Within a few weeks she was dead. Her disease steadily progressed while she deceived herself. A young woman had diphtheria. She was a Christian Scientist. Her sister also was a Christian Scientist. The sister who was well would not allow any one to enter the room. Within three days the patient was dead. Up to the very last the sister who was well affirmed that there was nothing the matter with her sister. In the meanwhile the diphtheria was certainly and steadily destroying her life. A Christian Science healer was taken with a severe pain in the region of the bowels. For two days she lay in agony, affirming that she was well and that there was no illness. At last her better sense prevailed and she was taken to Wesley Hospital, where the physician operated for appendicitis, and she recovered her health. She still continued, however, to laud Christian Science, when she would have died had it not been for the operation by the physicians. Hundreds are dying or are dead in Chicago, because Christian Science has led them by its falsehoods to abandon the proper treatment for their diseases. These are usually people of weak minds and of little or no will power. *Is it not, however, time for some one to call attention to this dangerous fraud?*

Christian Science has become a commercial matter. It is no longer a religion, but a mere money-making institution. The "healers" are scattered all over our city. People who have never *earned* a dollar before are prospering as Christian Science healers. They invite the weak-minded to come and pay them two dollars for the privilege of being told that there is nothing the matter with them. Hundreds of women are making a good living out of their dupes. It is a pertinent question to ask, If there is no disease and no illness, why should there be any Christian Science healers? If there is nothing to heal, what do the people pay for when they pay the healer for his or her services? Do these people who are sick actually pay two dollars for something which has no existence or reality? A moment's consideration upon the part of any sane person would show the absurdity of this situation. It is not alone the foolishness, however, of this fraud, but the dangerous character which it has assumed, which has led to the writing of this article. The writer has

personally buried scores of Christian Scientists who might have been living to-day had it not been for the falsehoods of that system.

This circular is being put out at the writer's own expense. If it is desired that it have a larger circulation, gifts for this purpose will be gratefully received.

Those desiring these circulars may have them at cost.

JOHNSTON MYERS, 2320 Michigan Avenue, Chicago, Ill.

## SYMPOSIUM ON THE FEE QUESTION BY THE PHYSICIANS' CLUB OF CHICAGO.

In this issue of *THE JOURNAL* will be found a discussion of the subject which has already received marked attention in the columns of this *JOURNAL* and which has grown to be of such importance that we are constrained to mention the matter editorially at this time. The fact that this subject has received attention from journals in all parts of the country, largely following the lead of the *ILLINOIS MEDICAL JOURNAL*, shows that the evil really exists and that there is great necessity for consideration of the subject in an effort to at least regulate and, if possible, stop the abuse. The papers read and the discussion of the subject by this influential club of Chicago will, we believe, have a large influence in the matter and we hope the entire discussion will be read by all of our members.

## THE FEDERATION OF LABOR TAKES UP FIGHT AGAINST TUBERCULOSIS.

We are pleased to note that the State Federation of Labor, with headquarters in the Pierik Building, Springfield, Ill., has issued a circular, copy of which follows, which certainly will be a great influence in the prevention and cure of tuberculosis. As we have frequently stated before, it seems to us that the organizations of American societies, so wide spread and covering nearly every household in the commonwealth, must have a great influence in the prevention and cure of diseases. The circular speaks for itself and we hope it will have the endorsement of all of our members.

TUBERCULOSIS, "THE GREAT WHITE PLAGUE."

SPRINGFIELD, ILL., April 3, 1909.

*To All Trade Unionists, Greeting:*

Consumption can be cured! All tuberculous troubles, if treated in the earlier stages, may be overcome. If you think you are afflicted with this dread disease it will cost but two cents to have a correct diagnosis made, thus protecting yourself and those dear to you. Arrangements have been made whereby any licensed physician in Illinois will forward a sample of your sputum to the State Board of Health, who will examine it free. Eight thousand of our friends and neighbors die every year in Illinois from this dread disease. If you desire to protect

yourself without any cost whatsoever the Illinois State Federation will write you fully.

Your taxes pay for expert services to properly diagnose your case and ascertain if you have tuberculous trouble. Any doctor will give you a little tin box, made for the purpose. You spit in this box and the doctor forwards it to the State Board of Health. It costs the doctor only two cents for postage.

If you find that you actually have the disease the State will further assist you. The Illinois State Federation of Labor will write you how to secure all the information you desire.

The most common symptoms of consumption are: Cough, gradual loss of flesh and strength, fever, night sweats, and blood spitting. Any one of these signs is suspicious. The cough is often absent in the early stages of the disease, the symptoms often being such as to lead one to suspect that he has "stomach trouble," general debility," or various other ailments.

Protect those you love by protecting yourself. If you fear you have the dread tuberculous disease, find out. Remember the cost of the examination of the sputum is only two cents.

Every practicing physician can also secure from the State free of cost, antitoxin for use in diphtheria cases. We can also give you valuable information if a member of your union or family is threatened or afflicted with insanity. All this will cost you nothing.

We desire to make the Illinois State Federation of Labor the greatest force for good in the State or the country. We offer you our knowledge and assistance freely and desire that you take full advantage of the influence of this office. You pay for these advantages and are entitled to their use. With best wishes,

Fraternally,

EDWIN R. WRIGHT, President.

JAMES F. MORRIS, Secretary-Treasurer.

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#### COUNTY TUBERCULOSIS BILL PASSED.

On April 8 the bill enabling counties in this state to levy a tax to establish and maintain hospitals for the cure and treatment of persons suffering with tuberculosis passed the State Senate and, with the signature of the Governor, will become a law. It was known as the Wright Bill, as it was first introduced by Representative Wright, of McLean County. The Bloomington Anti-tuberculosis Association first proposed this measure and it was urged by several organizations in McLean County. The Board of Supervisors of each county are given discretion as to the method of creating and managing the sanitarium, if established. It seems likely that McLean County will be the first in the state to establish such a sanitarium under this law. Indications now are that Governor Deneen will sign the bill. Hon. Edmund O'Connell, of Bloomington, deserves special credit for pushing the bill through the Legislature.



## FEMALE SUFFRAGE.

The Capitol was the scene of a peaceful invasion on Wednesday the 14th of April, which may mean a great deal for the future of the people of Illinois. A train load of prominent ladies of Chicago and other parts of the State appeared before the legislature and gave reasons why the franchise should be extended to a large number of individuals who have not heretofore enjoyed that privilege. Just what the result of this agitation will be it is now of course impossible to say. Whether the affairs of state will be better preserved by the admission of women to the voting booth is a question upon which the best minds differ. Even women themselves are not a unit upon this matter, and a large proportion of them do not seem to desire the privilege of the ballot. Probably the same thing might have been said concerning the slaves prior to the War of the Rebellion, and agitation on this subject may be as long drawn out and the interest may become as intense as that which has preceded the other remarkable changes in the attitude of society toward its individual units. It is certainly a subject upon which every one should endeavor to obtain the best possible information before making a decision. We can all agree with some of the expressions which have been used by the women, namely: first, that individuals of their sex paying taxes should be entitled to some voice in the expenditure of the money; secondly, individuals should not be obliged to accept laws upon which they have not had the opportunity of voting; thirdly, that a vast majority of the women are better prepared to cast a ballot than a large number of men. On the other hand, first, it may be questioned whether the interests of the present and coming generations will be improved by radically changing the privileges of women in connection with affairs of state. Secondly, whether the female mind is capable of forming judgment free from prejudice and sympathy. Thirdly, whether the large increase in expense incidental to an increase in the number of ballots will be compensated by the improvement in condition of affairs. Probably there is no profession more clearly than the medical profession able to appreciate the intricacies of this problem. We hope therefore that it will receive from our members thorough consideration and we shall be pleased to hear expressions of opinion in the columns of THE JOURNAL.

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## UNITED STATES PHARMACOPEIAL CONVENTION.

In an official announcement of this meeting, Dr. Horatio C. Wood, of Philadelphia, Pa., has issued a circular notifying the several bodies entitled to appoint delegates to the First Decennial Meeting of the said convention to be held in the City of Washington, May 10, 1910. The Illinois State Medical Society is entitled to representation at this meeting, and attention is hereby called to this matter in order that a delegate may be elected at the Quincy meeting this month.

## Correspondence.

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### HOMEOPATHS ON HOMEOPATHY.

ELGIN, NEB., April 13, 1909.

*To the Editor:* Seeing your unsigned article in *THE JOURNAL*, also your editorial, and being one of those homeopaths who belong to a "regular" Society, it might be interesting as well as somewhat instructive to know how and why I fell so far from my tenets as to "join a regular" medical society. In the first place history shows conclusively that these "regular" societies expelled their homeopathic brethren from their society because, forsooth, they would not give up their homeopathy, and stop thinking for themselves, and this too in a country where every man has a supposed right to think for himself without prejudice. To get right with the homeopaths the "regulars" should again open their doors and say, "come right along comrades, let's be together for the purpose of advancing medical science and teaching the public to properly appreciate our services." I had made up my mind long before to join a "regular society" as soon as I received an invitation and not before. One day I called in the president of the County society in consultation. I found him a gentleman and a scholar and outside of a few good natured banterings, we understood each other perfectly. He slapped me on the shoulder and asked me to the next meeting of the society, which I attended, and upon receiving an invitation to join, I did so. I do not know as I thereby surrendered my rights to think for myself, nor do I believe I was converted from homeopathy, because I found, as Dr. G. Frank Lydston has aptly said, "If the homeopaths had not been so anxious to tumble into our band wagon, we would have soon been tumbling into theirs." I found my colleagues using diphtheria antitoxin for diphtheria, tuberculin for tuberculosis, and crazy over the subject of serum therapy. They use carbolic acid for burns, mercury for the lues, and hundreds of other medicines which will cause symptoms as near like the conditions they are used for as two peas in the same pod, but when you say that hated word "similia," they draw back horrified as if it would contaminate them. I have entirely stopped using the word "homeopath" or posing as one, because I do not wish to excite personal feelings, and in my talks with professional brethren I simply tell them the exact conditions I find certain remedies useful in, and they promptly adopt them to their own satisfaction.

In conclusion, allow me to say that I hope to see the day any so-called 'pathy' will be no more, but as far as the principle is concerned underlying any system of medicine which is founded on natural laws, that will continue to live regardless of any one or anything.

A. E. COLLYER, M.D.

### DECADENCE OF SECTARIAN MEDICINE

*To the Editor:* To become easily convinced of the hopeless demoralization in the ranks of sectarian medicine, one has only to make a short study of the annual announcement of the various so-called homeopathic colleges.

"The Denver Homeopathic College," in changing its name to "The Denver College of Physicians and Surgeons," says: ". . . Its field of work is based upon those broad and comprehensive lines of the leading medical schools." Concerning materia medica for the third year, we are advised that "this course will include drug action, hypodermic medication, the general classification of drugs as stimulants, cathartics, diuretics, etc., serum and organotherapy." One might, with some reason, be tempted to inquire wherein the sort of teaching herein outlined differs from that of William Osler, Frank Billings and William E. Quine. Under the heading, "Principles of Medicine," we are assured that the history of medicine will be elucidated, including, it may be hoped, some of the various delusions that have from time to time beset the profession of medicine. The Denver Homeopathic Hospital dropped its sectarian title several years ago. The Denver college, by the way, seems to have been without matriculates during the past year, since no such list is published.

Cincinnati and Louisville are two old, rich and highly cultivated cities, lying within a hundred miles of one another in the famous Ohio valley. Each has a homeopathic college. Last year both schools had thirty matriculates between them. The combined faculties number more than sixty. Some cold-blooded student of political economy might suggest that two teachers to one student is a waste of energy. The Cincinnati college states in italics that "some members of the class of '07 had as many as forty labor cases." The class of '07 consisted of one graduate, a woman, and it would seem that she must have had little time from her obstetrical labors to attend to other work.

The Cleveland Homeopathic College, with a faculty of sixty, had a graduating class of eleven. This institution is said to hold valuable property and to maintain standards that compare favorably with several better known regular schools.

The Hahnemann College of Chicago, one of the oldest of its class, owning large interests and in many respects highly equipped for laboratory and hospital study, graduated a class of forty-three. Its faculty numbers about a hundred.

The "Southern Homeopathic College" of Baltimore, has changed its name to "Atlantic Medical College," whether to emphasize its proximity to salt water or to signalize its freedom from sectarian shackles does not appear. There must be certain obstacles to sectarian teaching in such a city as Baltimore.

The Hahnemann College of Philadelphia has a great deal to say about anatomy, physiology, methods of diagnosis, including microscopy, subjects that are taken for granted in regular institution, but I hardly believe that its highly diluted sectarianism would offend any sensible person. Hahnemann's *Organon* is, of course, mentioned, and it is really a most interesting work that every one ought to read. I have a copy,

the gift of an old friend, and I believe that I could entertain an ordinary medical class with its teachings for at least an hour. If the *Organon* of Hahnemann is the only thing that is keeping such a respectable institution as the Philadelphia college out of the American Medical Association I do not believe that one vote out of five hundred would be raised in opposition. If I could speak for the Association my words would be, "come in; bring the *Organon* with you; if we learn anything good out of it we shall not keep it from you but let it be known for the good of all. For our part we claim to have no secrets, no methods that are not free to all. Why should you keep from us anything that we ought to know?"

Two eastern colleges, the Boston University Medical School and the New York Homeopathic College, are noteworthy for their high standards and their splendid equipment, but it may be said without disrespect to either that their faint trace of sectarianism is more largely a matter of form than otherwise. Like some members of the poverty stricken aristocracy of Spain and France, they have certain family traditions to maintain, certain appearances to keep up, so the phantom term "homeopathic" is kept at the mast head.

Colleges that exist only because of their low standards and their slipshod methods are not unknown in regular medical circles. Homeopathy has its full share of them. Probably they will be amongst the last to go into decay and bankruptcy.

What of the States of Michigan, Iowa and Minnesota, all of which maintain costly departments of homeopathy in their State Universities? It must cost the taxpayers of these States a very large sum in the aggregate to maintain a showy and useless appendage. How long will they submit to such an imposition? I venture to say that Michigan, for example, with a costly department and a handful of students, would save a considerable sum to make a contract with some outside sectarian college to supply homeopathic instruction to its students. I doubt not that several struggling colleges located outside of Michigan would be more than pleased to make what are commonly known as wholesale rates under such conditions. An influx of Michigan students into Cincinnati, or Louisville, or St. Louis, or Denver would be hailed by some as something worthy of commemoration. Iowa and Minnesota would certainly catch the infection for economy and perhaps export their would-be homeopaths.

What is the practical solution? My judgment is that every educated and qualified sectarian practitioner should be invited into the ranks of regular medicine, there to be treated precisely as we deal with our own graduates, according to their merits. I once shocked a community by calling in consultation a nominal homeopath. He was a man of fine general culture, broad views, sound judgment, and by all odds the ablest available specialist. I asked him frankly why he adhered to a mere name that meant nothing to him. He replied with some feeling, "because I claim the right to practice what I believe is best for the interests of my patients!" The reply aroused within me some degree of warmth. I turned upon him rather sharply and inquired:



"Do you mean to say that any regular has ever claimed to dictate to you what you shall eat, or what you shall wear? Who, name one, has ever called you to account for your methods of practice? Certainly I have learned a great deal from you, for which I am grateful, and did you ever hear me make light of anything but your 'pathy?' The fact is, you are overcome by a sense of false pride. You imagine that we regulars are a pack of wolves who want to gobble you up. The fact is, we ourselves want to be gobbled up by some one who can teach us something. The only difference between us is that your practice, so far as I am able to judge, is better, more skillful, than mine. You call yours 'homeopathic.' I do not call mine anything. Why should you?"

I am fully alive to the amazing tactical blunders committed by the regular profession in its dealings with sectarians. Twenty years ago an illiterate, blundering, little homeopath located in a little city of some six thousand inhabitants. The regular profession was composed in the main of strong, well-equipped men, some of them enjoying far more distinction than falls to the lot of ordinary doctors. This homeopath was no sooner well settled in his nest than the foolish policy of persecution set in, greatly to his advantage. Dr. H. haughtily declined to consult with him. Prominent people took up his "cause," strangers who had no interest whatever in him called to make his acquaintance, generally taking away with them the vial of sugar pellets saturated with some harmless dilution. In short, this insignificant sectarian, who would have failed as a hack driver, became one of the prominent rich men of the town.

The end is in sight. I do not pretend to say what time it will come, but it is on the road. The sectarians are hopelessly disorganized. They are floating without steam or rudder toward the reef. They know it. It is for the regular profession to throw out the life lines, to man the boats and to save what is worth saving. Most of the survivors will need some food and clothing, but, above all, some kindly words of sympathy. No harsh words, no cutting reproaches, only a generous welcome, an offer of all needed assistance without ostentation, and an invitation to take a seat by the fire, where science, and science only, supplies the fuel.

OBSERVER.

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#### ANNUAL COUNTY SECRETARIES' CONFERENCE.

CHICAGO, ILL., April 23, 1909.

*To the Editor:*—The Third Annual Conference of County Secretaries will be held on Wednesday noon, May 19, 1909. The Executive Council of the State Society has arranged to give the secretaries a complimentary dinner at this time, and all are particularly urged to be present. A very interesting and valuable program has been arranged, and if the secretary of any society is unable to attend it is suggested that he see to it that a representative is present so that every county is represented in some way.

Dr. John B. Donaldson, of Pennsylvania, will be the principal speaker. As the originator of the movement he will have many interesting

things to say in reference to conference work in general and of the secretaries in particular. Dr. F. R. Green, of Chicago, assistant secretary of the A. M. A., will speak on "Business Methods in Medical Organizations."

Our genial State Secretary will have a few words of suggestion for us, and, as one of the important things for the county secretary to know is "How to Keep Right with the State Secretary," all will wish to get the facts from headquarters.

Dr. A. J. Roberts, of the La Salle County Medical Society, will speak on "Bookkeeping for the County Secretary." These, together with addresses by Dr. Carl Black, Chairman of the Council, and Dr. Pettit, the President of the Society, will furnish a most desirable program.

County secretaries, this is for you. Plan now to take a few days off. Do not forget the date or the place.

Quincy, Ill., May 19, 1909, at 12 o'clock noon.

C. HUBART LOVEWELL, President.

D. G. SMITH, Secretary.

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## Scientific Editorial

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### THE STERILIZATION OF CRIMINALS AND OTHER DEFECTIVES BY VASECTOMY.

Official records of Illinois institutions show that the mentally defective classes—insane, imbecile and epileptic—have increased since 1880 about twice as rapidly as has the total population of the state. The aggressive defectives, the criminals, have increased even more rapidly. For example, the Chicago Health Department reports show that in 1877 there was one homicide to approximately 36,000 inhabitants; in 1907, one to about 10,000 people in that city. The millions spent each year for the maintenance of these unfortunates constitute but a small part of the aggregate loss, economic, social and moral, curtailed by them.

The duty of the state to nurture its mentally defective citizens is undisputed, but its duty to prevent these irresponsibles from breeding their own kind, though often overlooked, is equally indisputable. The more obvious advantage accrues to society; the less obvious but no less real gain accrues to the as yet unbegotten offspring of these unfortunates. Intelligent philanthropy aims to prevent, not merely to mitigate misfortune.

The urgent necessity for restricting the procreation of natural criminals and other irresponsible parasites on society is securing proper recognition. To this end various impotent or impracticable methods have been proposed, and even incorporated under the statutes of several states. Thus Minnesota, Connecticut, Kansas, Michigan and Ohio forbid the marriage of feeble-minded, epileptic and insane women under the age of 45 years. But since marriage is nowhere essential to procreation, least of all among the mentally defective, such laws—even if rigorously enforced—would not efficiently restrain the breeding of irresponsibles.

For example, of the thousand criminal, feeble-minded and otherwise defective descendants of the famous Jukes criminals, many were born out of wedlock.

It is obvious that a measure which shall effectively prevent procreation by the mentally defective must appeal not to their feeble minds, but to their bodies; they must be made physically incapable of procreation.

How shall this be accomplished? Three methods have been proposed—castration, colonization, vasectomy.

1. Sterilization of the male criminal by castration, though often discussed, will probably never secure legal sanction, because it destroys the subject's sexual power; for, while different men worship different gods, all men worship the same goddess, Venus.

2. Colonization—the confinement of the mentally defective in colonies where access to the other sex should be impossible—has been often suggested as a bar to their propagation, though only by those who have never considered vasectomy. Thus at a recent discussion before the Physicians' Club of Chicago, an eminent speaker advocated colonization for preventing the breeding of human derelicts. When this gentleman's attention was subsequently called to the value of vasectomy to this end, he frankly endorsed it in these words: "This method of arresting the production of criminals is, I am bound to believe, one of the coming blessings to humanity."

3. Vasectomy sterilizes a man without the slightest impairment of his sexual power or pleasure. Thousands of men have been unwittingly sterilized through bilateral epididymitis, and never suspect that their procreative functions are not perfectly normal until their marriages prove barren; they are potent, but not fertile. That vasectomy itself is equally harmless to sexuality is shown by the experience of those upon whom it has been performed. Vasectomy is an office operation: it is performed in a few minutes under cocaine anesthesia, through a skin cut half an inch long; it entails no wound infection, no confinement to bed; it is less serious than the extraction of a tooth.

The prevention of procreation by male defectives through vasectomy is not an iridescent dream. In March, 1907, the Indiana legislature passed a bill authorizing the sterilization of "confirmed criminals, idiots, imbeciles and rapists" in the state institutions of Indiana. In the prison at Jeffersonville over 800 convicts have been sterilized, some by authority of the state, but over 200 of them at their own request. This voluntary submission to sterilization by hundreds of convicts removes the only conceivable opposition to this method of protecting society—the sentimental.

In February, 1909, the Oregon legislature passed a duplicate of the Indiana bill, adding a definition of "confirmed criminals." This term "shall be deemed to apply to and include all persons serving a third term in any penitentiary or penal institution upon conviction of a felony."

As yet only Indiana and Oregon have actually passed such a law, though the subject has been broached elsewhere. Thus Governor Shel-

don, in his last message to the Nebraska legislature, recommended the consideration of a similar measure; and his successor, Governor Shellenberger, writes that he will bring this matter before the proper legislative committee.

A sterilization bill, patterned after the Indiana law, introduced by Senator (Dr.) Womack, has been recommended for passage by the Judiciary Committee of the Illinois Senate. Several Chicago societies have recommended such enactment; it is advised that county medical societies and physicians who favor such a measure should communicate their approval to Senator Womack and to their local representatives in the legislature.

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BE SURE TO ATTEND  
THE  
STATE SOCIETY MEETING  
AT  
QUINCY, MAY 18, 19, 20.

The Committee has Made Arrangements for YOU  
Don't Disappoint Them.



# OFFICIAL PROGRAM

OF THE FIFTY-NINTH ANNUAL SESSION OF THE ILLINOIS STATE MEDICAL SOCIETY, TO BE HELD AT QUINCY MAY 18, 19, 20, 1909.

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## ORDER OF PROCEEDINGS

Registration office first floor Vermont Street Methodist Church, corner Eighth and Vermont Streets, one block north of the postoffice.

### FIRST DAY—MORNING.

8:45. Call to order of the House of Delegates by the president in Sunday School room, Vermont St. M. E. Church.

9:00. Call to order in General Session by the president in main auditorium, Vermont St. M. E. Church, James W. Pettit, Ottawa.

Invocation, M. Edward Fawcett, Quincy. Bishop Quincy Diocese.

Address of welcome, Joseph Robbins, Quincy.

Response on behalf of the society by the president.

Report of the Committee of Arrangements by the chairman.

Announcements by the president.

9:15. Call to order of Section One for the reading and discussion of papers.

1:00. Adjournment.

### FIRST DAY—AFTERNOON

2:00. Call to order for continuation of work of Section One.

Symposium on Nephritis.

Adjournment.

### FIRST DAY—EVENING

8:00. Music, to be followed by calling to order by first vice-president, James L. Wiggins, East St. Louis.

President's annual address, "The Relation of the Medical Profession to the Secular Press," James W. Pettit, Ottawa.

Address, "The Doctor in Civil Life," James A. Witherspoon, Nashville, Tenn.

### SECOND DAY—MORNING

8:45. Call to order of Section Two.

11:00. Special order Section Two.

Symposium on Gastric and Doudenal Ulcers.

House of Delegates meet pursuant to adjournment.

12:00. The council's complimentary luncheon to the secretary's conference at Masonic Hall.

1:00. Adjournment.

## SECOND DAY—AFTERNOON.

- 2:00. Call to order for continuation of work of Section Two.  
 3:00. Oration on Surgery, John B. Deaver, Philadelphia.  
 3:30. Call to order of the Medico-Legal Committee. Sunday School room, Vermont St. M. E. Church, by Harold N. Moyer, Chicago.  
 6:00. Adjournment.

## SECOND DAY—EVENING.

7:30. River excursion and reception to the members of the Illinois State Medical Society. Trip on the Diamond Jo Packet steamer, "Dubuque" to Canton, Missouri, and return.

## THIRD DAY—MORNING.

8:45. Call to order of Section One and Two in joint session for consideration of Borderland cases.

11:00. Call to order in general session by the president to receive report of House of Delegates.

Induction of president-elect.

Final adjournment.

NOTE:—The chairman of the Committee on Entertainment of the Ladies has made preparations for automobiles rides to the parks, country club and a reception.

## SECTION ONE—TUESDAY

PRACTICE OF MEDICINE, MEDICAL SPECIALTIES, MATERIA MEDICA, THERAPEUTICS, ETIOLOGY, PATHOLOGY, HYGIENE, STATE MEDICINE AND MEDICAL JURISPRUDENCE.

Chairman.....Joseph L. Miller, Chicago  
 Secretary.....Clarence A. Wells, Quincy

ADDRESS, "The Doctor in Civil Life," John A. Witherspoon, Nashville Tenn.

1. The Serum Treatment of Epidemic Cerebro-Spinal Meningitis, Frank S. Churchill, Chicago.

History of the serum treatment of epidemic meningitis. Reports of writer's cases, with review of the literature. Importance of early diagnosis in order to ensure best results. Necessity of lumbar puncture in all cases of meningitis, to determine type of the disease. Serum valuable only when injected into the spinal canal. Technique of administering.

2. Some Questions of Importance in Infant Feeding, Frank N. Walls, Chicago.

3. The Value of Diabetic and Prepared Foods, R. T. Woodyatt, Chicago.

I.—The objects for which prepared foods are theoretically intended:

The nutrition of those who for some reason are handicapped in their power to get sustenance from foods ordinarily available. Normals in strange environment, explorer, etc.; infants deprived of breast milk: invalids, convalescents, etc., whose ability to digest, assimilate or utilize foods in the common form is impaired.

Selection of a prepared food dependent upon the nature of the case.

II.—The fundamental requirements, which a suitable food must fulfill and on which any individual foods is to be judged, are:

Its content of matters capable of yielding energy in the body—fuel value.

Its digestibility.

Its availability, which includes steady market supply and price.

III.—The prepared foods now on the market considered specifically in accordance with the foregoing principles under two main groups.

(a) Convalescent, invalid and infant foods.

(b) Diabetic foods.

(a) Convalescent, invalid, etc.:

Their cost per pound as compared with bread.

Their fuel value per pound as compared with bread.

Beneficial properties of certain ones, apart from the above considerations, real and fictitious.

(b) Diabetic Foods:

The essence of dietetic treatment in diabetes, save in very severe cases, is limitation of carbohydrate food. The craving for bread based on the cry of the tissue for sugar is best ameliorated by improving the tolerance of the body for sugars. "Breads" which satisfy this craving contain starch. *Bread* without starch, a paradox.

Legitimate uses to which substitutes for bread may be put are: The supply of a vehicle on which bread, cheese, etc., may be spread and which "bites" like bread; the supply of a greater variety of forms in which a patient may take his non-carbohydrate fare.

Discussion of the articles on the market with reference to their starch content, their total food value and their price.

The great tendency of physicians to prescribe gluten flours ad libitum and the certainty that free use of all except a very few "diabetic flours" leads to a high aggregate of starch ingestion per day at high price and in spite of restrictions upon the use of the common amylaceous foods.

Exhibit:

4. Importance of rest in Acute Inflammatory Conditions, E. C. Franing, Galesburg.

5. The Advantages of Intermittent Positive Pressure for Resuscitation, Joseph A. Capps, and Dean D. Lewis, Chicago.

A brief reference to the special fields of usefulness of the various methods of artificial respiration. A description of a method often employed in experimental work to resuscitate animals, viz., intubation and intermittent introduction of air by means of a bellows. Superiority of this method to others above mentioned. Objections to the method considered. Author's experiments to determine possible harm from emphysema or pulmonary infection show that the danger is insignificant. The method is recommended in human beings in case of collapse and sudden cessation of the cardiac or respiratory function.

The advantages of the method are:

1. The apparatus is cheap and can be quickly put in use.

2. The danger of subsequent emphysema and pulmonary infection is negligible.

3. The results are superior to those obtained by artificial respiration as usually employed.

6. The Problem of the Blind, J. T. McAnally, Mt. Vernon.

The nature and extent of the problem. The need of more exact knowledge. The prevention of blindness. Massage as an occupation for the blind of both sexes.

7. The Responsibility of the State in the Care of the Mentally Deficient and Insane Dependents, Frank Billings, Chicago.

The paper will deal with a statement of the condition of the mentally deficient and insane dependents in the state hospitals for the insane, the school for

the feeble-minded and in the various county almshouses. An attempt will be made to show that the true economy in the care of these patients may mean, in the beginning, the expenditure of a greater amount of money but that the final result will be a saving to the state. The responsibility of the physicians will be considered in reference especially to the recognition of deficient mental states and of acute insanity and the proper method of managing this class of people.

#### 8. Tuberculosis in Infants and Children, C. W. Lillie, E. St. Louis.

Frequency. Mortality statistics show too low a percentage. Causes of its frequency. Heredity, susceptibility, milk from tuberculous cows and tuberculous mothers. Careless examinations by doctors. More frequently due to ignorance of parents, and home-made diagnosis and treatment. Tuberculosis often diagnosed as "malaria," "typhoid fever," "teething," summer complaint," "stomach trouble." Report of a case—First diagnosis by the grandfather, a lawyer, "malaria;" later amended to "stomach trouble," and subsequently as "injury to the head by a fall." Death—Autopsy showing extensive peritoneal and meningeal tuberculosis. Duties of doctors, of parents, of authorities in cities and towns.

#### 9. A Brief Report of Cases of Early Pulmonary Tuberculosis Treated by Different Tuberculins, E. H. Butterfield, Ottawa.

Tubercle bacilli of the *typus humanus* and of the *typus bovinus* have been identified in man. The bovine type is more common in children than in adults. A brief report of a series of 23 cases of early phthisis in which the bovine tuberculin was administered. The other series comprises 8 incipient cases in which Koch's B. E. was administered, and 17 incipient cases in which tuberculin was not used. Method of administration. Comparison of results. Conclusions.

#### 10. Value of the Cutaneous Tuberculin Test, Frederick Tice, Chicago.

### SYMPOSIUM ON NEPHRITIS.

#### 11. Significance of Albumin and Casts in the Urine, Arthur Elliot, Chicago.

#### 12. Nature of the Cardio-Vascular Changes in Nephritis, Alfred C. Croftan, Chicago.

Cardiovascular changes preceding, accompanying and following nephritis; their pathogenesis and treatment.

#### 13. Value and Limitation of Salt Free Diet and Restriction of Fluid in Nephritis, Charles S. Williamson, Chicago.

#### 14. When and How Shall We Treat Hypertension, Robert B. Preble, Chicago.

James B. Herrick, Chicago, will open the discussion on the Symposium.

### SECTION TWO—WEDNESDAY

#### SURGERY, SURGICAL SPECIALTIES AND OBSTETRICS.

Chairman.....Daniel N. Eisendrath, Chicago

Secretary.....H. N. Rafferty, Robinson

ADDRESS, "Gallstone Disease," John B. Deaver, Philadelphia.

#### 1. Conservative Joint Surgery, Larence Ryan, Chicago.

Necessity for radical operation in and about joints when badly diseased or severely traumatized. When joint surfaces can be saved, operation should be designed to favor return of motion, at least in part. The question of attempting to establish mobility, when feasible, in ankylosed joints.

#### 2. Fracture of the Pelvis with Rupture of the Bladder, Diagnosis,



Treatment, Prognosis, with Report of Four Cases, E. K. Lockwood, Virden.

3. Fracture of the Acetabulum, with Central Dislocation of the Femur, William Fuller, Chicago.

Fractures of the acetabulum with central dislocation of the head of the femur is an injury not often seen, but is one of great importance. Since the injury was first described, about 1788, the number of cases recorded has demonstrated the fact that the diagnosis is beset with great difficulties and the result of treatment far from satisfactory. The mechanism of this injury is not clearly understood. When we realize that forces of varying degrees, acting under different circumstances, and often applied in various directions, produce lesions of the pelvic basin and its contents, which exhibit many features in common, our lack of knowledge on this point is not at all strange. The symptoms are not characteristic, and many of the more prominent ones may be absent altogether. The injury may clinically mimic many other, and much less serious injuries, found in the hip joint.

The high mortality of intrapelvic dislocation of the femoral head is due, doubtless, to the serious complications accompanying this fracture; but that the unsatisfactory results of treatment in cases that do not die are due to mistakes in the diagnosis, is unquestionably shown by reviewing the literature on this subject. The best results in the management of this severe injury are to be obtained only by making an early and correct diagnosis, and by the employment of such measures as effectively deal, first, with the complications, and, secondly, those measures which reduce and hold reduced the fractured and dislocated bones.

4. The Surgical Treatment of Appendicitis, Clifford U. Collins, Peoria.

The best time to remove the appendix is during the first twenty-four or thirty-six hours of the first attack. Some reasons why more are not removed during this period. Sometimes twenty-four hours elapse between the family physician's first and second visit, and this important period is allowed to pass with nothing done. The next best time is in the interval between attacks. If an abscess develops the pus must be drained, and the appendix should be removed at a second operation. The patient dreads the second anesthesia and second operation and often will not return to have the appendix removed. This is dangerous to the patient and unsatisfactory to the surgeon. The abscess may be drained quickly under nitrous oxid gas anesthesia, which does not cause the patient to dread a second anesthesia and operation. In ten days or two weeks the appendix may be removed safely, even if the drainage tract is still open, provided the patient's pulse and temperature are normal.

5. Treatment of the Pus Appendix, G. W. Green, Chicago.

Definition includes all cases where there is pus inside or outside of the appendix. Diagnosis occurs at all ages from 19 months to 89 years. The three cardinal symptoms are pain, rigidity and tenderness. Incision—Right rectus, fast in majority of cases. Treatment of the appendix stump; the patient's post-operative comfort and recovery depend on the amount of traumatism of the abdominal contents during the operation. Drainage and closure of wound and post-operative care.

6. When Shall We Operate for Uterine Fibromata and Myomata, S. C. Stremmel, Macomb.

The different kinds of location of neoplasms. The patient's age and symptoms. Is the modern conception of conservatism in these cases rational?

7. Recognition and Treatment of Ectopic Gestation, Channing W. Barrett, Chicago.

Etiology, symptomatology and pathology as they relate to diagnosis and treatment. Typical and atypical symptoms, with illustrative cases. Discrepancies in

animal experimentation as a guide to treatment. Operative treatment, immediate and delayed, considered.

#### 8. Skin Grafting, with Report of a Case, G. H. Galbraith, Clifford.

Subject one which confronts both city and rural practitioner. Conditions demanding skin-grafting are result of lacerated wounds from machinery, burns and ulceration from numerous causes. If such wounds are allowed to cicatrize, resulting scars are often subject to pressure, are non-resistant, and often the occasion of severe contractions and deformities. Two methods of making graft: (a) Thiersch, and (b) transferring a flap the whole thickness of the skin, either leaving a pedicle of normal attachment or severing entirely (Krause). Surface to be grafted must be clean, dry and non-suppurating. Asepsis, and not antisepsis, the keynote to success. Report of author's case, in which a whole skin graft from gluteal region was used on the denuded palm, with good results.

#### 9. Report of a case of Brain Tumor, with Specimens of Brain and Tumor, C. B. Horrell, Galesburg.

Discussion opened by Hugh T. Patrick, Chicago.

The case is interesting from the fact that one of the first marked symptoms was failure of vision, and the last eight months of the patient's life he was totally blind. For the first seven months of illness patient was under the care of an osteopath and was treated without diagnosis. A misfortune in the case was that he was not seen in the early months of the trouble by a physician, and a correct diagnosis made, as the symptoms were so masked later that mistakes were made in the diagnosis, and an operative case was considered non-operative, as the autopsy proved the tumor to be of the *dura*, and not of the brain, as the symptoms largely pointed. The point of especial interest is the claim for *special consultation*, early in suspected cases, and correct diagnoses hoped for, in locating the growth, and its successful removal, and relief for the patient.

#### 10. A Rare Case of Pemphigus, Requiring Surgical Attention, S. C. Glidden, Danville.

Patient an unmarried female, 28 years of age. History of patient and present condition. Character and distribution of lesions, and their absence from mucous surfaces. Microscopical examination of fluid from lesions. Treatment: (a) daily surgical dressings and (b) internal treatment.

Symposium on Gastric and Duodenal Ulcers, 11 a. m.

(a) Diagnosis, Christopher Graham, Rochester, Minn.

(b) Medical Treatment, B. W. Sippy, Chicago.

(c) Treatment of Non-Perforating Ulcers, A. J. Ochsner, Chicago.

The surgical treatment of gastric and duodenal ulcer must depend upon the accomplishment of three results in order to be practically successful.

1. It must remove all irritation from the ulcer in order to permit healing.

2. It must leave conditions so that the original cause of the ulcer is permanently eliminated.

3. It must leave a fairly satisfactory digestive apparatus after the patient has recovered from the operation.

The irritation in persistent ulcer being due to the accumulation of severely acid gastric juice passing over the denuded surface, this irritation can be relieved by drainage at the lowest point of the stomach by gastroenterostomy, which at once prevents the accumulation of quantities of acid gastric fluid in the stomach and provides an outlet so that the fluid does not have to pass over this raw surface. Fortunately the same procedure accomplished the second and third condition desired, provided the patient is carefully and persistently controlled in regard to taking non-irritating diet after the operation for the remainder of her life.

In old suspicious looking ulcers only will it be necessary to excise the pylorus. Rodman's operation, in order to prevent the implantation of carcinoma on the ulcer base. In ulcer accompanying hour-glass stomach excision and plastic is

frequently indicated. In perforative ulcer closure of perforation and if obstruction follows subsequent gastroenterostomy are indicated.

(d) Treatment of Perforating Ulcers, J. E. Allaben, Rockford.

Importance of the subject and its early diagnosis. Classification: Acute, subacute and chronic. Causes of perforation. Size and location of perforation. Comparison of perforation in the sexes. Symptoms. Treatment varies according to character and location of perforation. Repair of perforation. Consideration of gastrojejunostomy as an accompanying operation to overcome pyloric stenosis. In chronic perforation we have to deal usually with perigastric and subphrenic abscesses with general sepsis, and the treatment is that demanded in these conditions. Mortality of perforative cases and of its surgical treatment. Conclusions. Case; perforation of stomach near pylorus. Abdominal section, recovery. Pyloric obstruction three weeks later. Gastrojejunostomy; recovery.

Discussion led by John B. Deaver, John B. Murphy and Arthur Dean Bevan.

3 p. m. Gallstone Disease, John B. Deaver, Philadelphia.

11. Diagnosis of Disease of the Lung and Pleura, with presentation of Patient, Emil G. Beck, Chicago.

1. Modern aids in the early diagnosis of pulmonary tuberculosis.

2. The diagnostic value of stereoscopic radiographs in pleuritic effusions, lung abscess and empyema.

3. A method for differentiation of abscess of lung from empyema by means of bismuth paste.

4. The effect of the corset upon displacement of the intrathoracic organs.

12. Two cases of Bismuth Poisoning, V. C. David and J. R. Kauffman, Chicago.

Two cases of bismuth poisoning, with one fatality, following injection of bismuth-vaselin paste.

Case 1.—Tuberculous hip of twenty-one years' standing, with discharging sinus. Injection of sinus with bismuth vaselin paste (oz. iii), Sept. 8, 1908. Repeated injections (oz. vi), Sept. 28, 1908. Toxic symptoms, Oct. 9, 1908: 1. Ulcerative stomatitis. 2. Salivation. 3. Blue pigmentation on (a) gums, (b) tongue, (c) labial mucosa. 4. Questionable mental symptoms. Gradual subsidence of stomatitis but pigmentation in mouth for five months.

Case 2.—Clinical diagnosis of early tuberculosis of hip with sinus. Injection of sinus with bismuth-vaselin paste (oz. vi), Jan. 29, 1909. Toxic symptoms, Jan. 29, 1908: 1. Ulcerative stomatitis. 2. Salivation. 3. Pigmentation—(a) lips, (b) tongue, (c) buccal membranes, (d) fauces. 4. Gastroenteritis. 5. Nervous symptoms. 6. Decubitus sores. 7. Cachexia. 8. Death, Feb. 15, 1909. Autopsy:—Retroperitoneal abscess with free bismuth leading to hip joint; nephritis; enteritis; mesenteric lymphadenitis. Tests for bismuth in the urine. Analysis of bismuth used in paste. Blood findings. Literature of cases of toxic symptoms from bismuth-vaselin paste. Classification of these cases.

13. Diagnosis and Treatment of Ureteral Calculus, A. D. Bevan and H. L. Kretschmer, Chicago.

14. A Prostatic Brief, Gustav Kolischer, Chicago.

Indications for treatment and operative interference. Choice of methods and criticism thereof. Review of technique. Review of complications and results. Post-operative findings.

15. Vesical Symptoms due to Diseases External to Bladder, L. E. Schmidt, Chicago.

This article will not consider primary diseases of the bladder. It will only take up those diseases, both of a general and local character, which are outside the bladder, and yet produce vesical symptoms. In some instances the later, or so-called secondary bladder conditions, may be present. The importance of care-

fully prepared histories, physical examinations and the need of the application of all the modern methods of examination previous to the examination of the bladder itself with instruments, particularly with the cystoscope, is clearly set forth. There is a general classification of those diseases which are productive of bladder symptoms.

#### 16. Some Points the General Practitioner Should Know About Rectal Diseases, J. Rawson Pennington, Chicago.

How to make a rectal examination. Rectal examinations should be made more frequently in constitutional diseases. By personal examination only can conditions of the rectum with reference to function and disease be determined. Location of the more common rectal diseases. Ligation of anorectal tissue in mass should be condemned. "Locking up" the patient's bowels after a rectal operation is inimical to success and early recovery. Post-operative treatment is equally as important as the operation.

#### 17. Embolic Aneurysms, V. L. Schrager and Dean D. Lewis, Chicago.

This paper deals with four aneurysms observed in three patients suffering with endocarditis. The relationship between embolism and aneurysm formation has been definitely established, as in some cases the sharp, calcified embolus has been found in the aneurysmal sac; while in other cases the bacteria which have been recovered from the aneurysm were the same as those found in the vegetations upon the valves of the heart.

Some sixty cases of aneurysm of this type are recorded in the literature. The frequent involvement of the cerebral and superior mesenteric artery is noted. It is interesting that veterinarians have recognized for some time the occurrence of parasitic aneurysms in horse, the *strongylus armatus* being found in the sac. These aneurysms develop most frequently at the bifurcation of arteries where the emboli are apt to lodge.

Embolic aneurysms differ from the ordinary type in that they are often multiple. Four and five aneurysms have been seen in the arch of the aorta, while in some cases a brachial aneurysm has been associated with one of the superior mesenteric. In one case an aneurysm of the right brachial and right popliteal artery developed almost simultaneously. The diagnosis is readily made when the aneurysm develops upon peripheral arteries. But one case is recorded where the diagnosis of aneurysm of the superior mesenteric artery was made during life. Rehn's case in which an exploratory laparotomy was performed and an aneurysm of one of the branches of the superior mesenteric artery removed, will be discussed.

## JOINT SESSION OF SECTIONS.

### BORDERLAND CASES—THURSDAY.

#### SYMPOSIUM ON OBSTETRICS.

##### 1. Toxemia of Pregnancy, H. M. Stowe, Chicago.

##### 2. Some Obstetrical Operations, Chas. E. Paddock, Chicago.

Obstetrics is keeping pace with other branches of medicine, and the physician of thirty years ago would marvel at the progress. It is fast being recognized that the physician doing obstetrical work must have surgical knowledge and skill, and the better surgeon he is the better obstetrical work will he be able to do. Indications are arising constantly in the practice of the physician doing much obstetrical work for operative procedure in the interest of either mother or child. The physician should be able to recognize these conditions, and whether it be a Cesarean operation, a hebostectomy, a high forceps, or version it certainly would be better for the obstetrician to be able himself to perform this operation. Too many lives are sacrificed because of a lack of this skill.

##### 3. Treatment of Contracted Pelvis, Frank Lynch, Chicago.



## SYMPOSIUM ON EXOPHTHALMIC GOITRE.

## 4. Diagnosis of Exophthalmic Goitre, Hugh T. Patrick, Chicago.

There is no sign or symptom pathognomonic of exophthalmic goiter. Even the four cardinal symptoms are expressions of other maladies as well, and this applies much more generally to the numerous less frequent, secondary and less diagnostic manifestations. Enumeration of symptoms in the order of their diagnostic significance. Symptoms of grave prognostic import. Differential diagnosis: especially heart disease, neurasthenia, simple goiter, hysteria, chlorosis, diseases of sympathetic, myasthenia gravis and psychasthenia.

## 5. Medical Treatment of Exophthalmic Goitre, D'Orsay Hecht, Chicago.

## 6. Surgical Treatment of Exophthalmic Goitre, Carl E. Black, Jacksonville.

A review of the principles connected with surgery of the thyroid gland. A comparison of the surgical with the medical treatment. How and why cases should be selected for surgical in preference to medical treatment. The report of an illustrative case.

## 7. Thyroidectomy for Dementia Præcox: a Preliminary Report of the Results in Ten Old Cases of Dementia Præcox, Allen B. Kanavel, Chicago.

Following Berkeley's suggestion of the relation of the thyroid gland to dementia præcox and his report that certain cases had been benefited, and through the courtesy of C. C. Willhite, several well established cases of dementia præcox were placed under the observation of Dr. Louis J. Pollock, who made a careful study of their condition for a number of weeks.

These cases have been operated upon in association with Dr. Eustace, and the glands have been carefully studied from the pathological point of view in association with Prof. F. R. Zeit. Microscopical section showing the gland will be shown and the clinical histories of the cases following operation will be discussed, with a short review of the results in this series of old cases and in the series of early cases reported by Berkeley.

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Be Sure to Attend the  
**STATE SOCIETY MEETING**

AT QUINCY, MAY 18, 19, 20.

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**ANNUAL MEETING**  
AT QUINCY.

The Committee has Made Arrangements for YOU  
Don't Disappoint Them.

## COUNTY AND DISTRICT SOCIETIES

### BROWN COUNTY.

A regular meeting of the Brown County Medical Society was held in the Court House at Mount Sterling, Ill., Wednesday, April 7, at 2 p. m. The president, Dr. D. W. Owens, of Hersman, presided. The following members were present: Drs. Ash and Owens, of Hersman; G. W. Lucas, of Timewell; McGann, Allworth and Parker, of Mt. Sterling. James A. Day, of Jacksonville, was present as guest of honor. The minutes of the last meeting were read and approved. Dr. Allworth reported a case of fatal pulmonary embolism three weeks after parturition, followed by remarks by Drs. Owens and Parker. Dr. Ash reported a case of confinement followed on the fourth day by rigor and high temperature, a skin eruption resembling scarlatina appeared on the fifth day; diffuse peritonitis developed on seventh day, eruption faded on the eighth day, and was followed by profuse desquamation; died on fifteenth day. Dr. Owens reported a case of measles at confinement, premonitory symptoms preceding and the eruption appearing immediately after birth. The babe at birth made a fine exhibition of measles in the eruptive stage. At three months of age the same babe had gangrene of the toes of one foot which caused the loss of several toes. Dr. D. W. Owens read a short paper on "Sanitary Shallow Wells," giving an interesting description of one constructed by himself at the low expense of \$52.50, including pump; well twenty feet deep. Dr. Owens' paper was discussed by Drs. Allworth, McGann and Parker.

Dr. James A. Day, of Jacksonville, then read a most excellent paper, "Some Surgical Diseases of the Stomach and Duodenum and Operative Treatment," which was discussed by all members present.

### CLARK COUNTY.

The Clark County Medical Society met in annual session in L. J. Weir's office at 2:30 p. m., April 7, 1909. The president and vice-president being absent, Dr. Prewett was chosen president *pro tem*. Members present: Hall, Akester, McCullough, Mitchell, Burnsides, L. J. Weir, Prewett, S. W. Weir, Bradley, Johnson, Duncan and Rowland. Visitor, Dr. Young, of Casey. Dr. Johnson gave an interesting and instructive quiz on anatomy of the eye. Dr. L. J. Weir presented diseases of the eyeball, including testing for glasses. Officers were elected for the ensuing year as follows: President, E. M. Duncan; vice-president, L. H. Johnson, Duncan and Rowland. Visitor, Dr. Young, of Casey. Dr. Johnson gave an R. H. Bradley, L. J. Weir and L. H. Johnson.

The following was unanimously adopted:

*Whereas*, Our retiring president understands conditions and is especially well qualified,

*Resolved*, That this year, and every year, the retiring president represent our society at the State Medical Society as the delegate from this county, and the retiring vice-president be the alternative and if neither can attend the retiring president appoint a delegate.

Upon invitation and motion of Dr. Akester, the society voted to meet at Casey next. The secretary read the following report for the past year: Members in good standing, 15. Names of members and meetings attended by each during the year: Anderson, 1; Bradley, 6; Bruce, 1; Burnsides, 6; Duncan, 6; Hall, 2; Johnson, 5; Rynearson, 1; Mitchell, 7; Prewett, 1; Rowland, 1; S. W.

Weir, 8; L. J. Weir, 10; McCullough, 2. Drs. Pearce, Gould Smith, Jumper and Hinkley were each a visitor at one meeting. Number of meetings held, 10; largest attendance, 10; smallest, 2; average, 6.

In August the post-graduate course of study plan with monthly meetings was begun. It has been only reasonably successful. The subjects were discussed in detail if three or more were present. The greatest difficulty with attendance was the fact that one would wait for another and was so afraid there would be no one present that he would not get there himself. After convening our meetings have been interesting and profitable. All take to the work nicely. Whether or not to continue monthly meetings is up for decision by the society. Personally, I think the plans of quiz-master and class demonstration, clinically or otherwise, address or paper might be properly left to the individual who is to present the subject, *i. e.*, let him present the subject in any manner he can do it best. Upon motion and second it was unanimously decided to continue meeting monthly.

The treasurer's report showed a balance on hand of \$6.23.

Dr. Hall ably presented conjunctivitis, catarrhal, purulent and granular. The society adjourned to the banquet hall of the Congregational Church, where the Marshall members of the society furnished a seven course dinner for the doctors and their wives, after which, Dr. Hall acting as toastmaster, reminiscences, wit and humor flowed for an hour.

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### COLES COUNTY.

The Coles County Medical Society met Tuesday, April 6, at 7:30 p. m., at the Mattoon Public Library, Mattoon, Ill. About thirty members were present. The following excellent program was given and all the papers were well discussed: "Electrotherapeutics," Dr. J. T. McDonald; discussion by Drs. Voight, Morgan and Alexander. "Infections and Their Treatment," Dr. Ed. Summers; discussion by Drs. Vanatta, Montgomery and Iknayan. "Bronchopneumonia," Dr. Zepin; discussion by Drs. Transeau, Viola Beck and Ferguson. Dr. R. H. Craig was appointed delegate to the state meeting.

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### COOK COUNTY.

#### *CHICAGO MEDICAL SOCIETY.*

A regular meeting was held Feb. 3, 1909, with the President, Alfred C. Cotton, in the chair. Henry Gradle read a paper entitled "Blindness of Hysteria," which was discussed by Hugh T. Patrick, and the discussion closed by the essayist. Emanuel Friend followed with a paper entitled "Intra-Canalicular Fibroma of the Breast Undergoing Sarcomatous Change." Dr. Leon Feingold read a paper entitled "Resection of Liver, with Report of Cases,"\* after which the society adjourned.

The treatment is, of course, one of suggestion. For instance, the use of electricity. Attention should be paid, however, to any underlying condition like anemia.

#### THE BLINDNESS OF HYSTERIA.

##### H. GRADLE, M.D., CHICAGO.

It was the object of the writer to show by illustrative cases that disturbances of the sight in hysteria—or, in short, of psychic origin—are more than mere curiosities. For it is stated in literature that the total blindness of one or both eyes of hysterical origin is uncommon, while the more frequent imperfections of sight, especially of color sight and contraction of the visual field found in hysterical subjects, are of little practical importance since they do not interfere with the use of the eyes. The writer's cases included one of total blindness brought on by covering the eyes to shut off a horrid view. Sight was at once restored by suggestive electricity.

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\* For text of paper see page 526.

In another instance a trivial accident left the impression that the eye was blind, while it was really perfect. No immediate effect could be obtained and the patient was not seen again. The writer added that in instances like the last two we could distinguish between hysterical blindness and willful malingering only by taking into account the patient's motives and the general impression made by him, but not by any objective findings.

Much more common than complete blindness is mere dimness or partial reduction of sight of psychic origin. It may occur in adults or children, and in the latter it is particularly difficult to interpret. In several of the writer's one-sided instances it occurred in an eye weaker than its mate, by reason of strabismus or some congenital anomaly. Double-sided weakness of sight may be prompted in emotional children by the irksomeness of school work.

The diagnosis is suggested by the absence of any lesion that could account for the poor sight, by normal play of the pupil, and especially by other neurotic indications, such as winking or habit spasms of the lids and emotional instability of the subject. But the diagnosis can be made sure only if the dimness is promptly removed by suggestive means or disappears under their influence gradually in a manner which excludes organic changes.

#### DISCUSSION ON THE PAPER OF DR. GRADLE.

Dr. Hugh T. Patrick:—This subject of hysterical blindness interested me very much a few years ago, because at that time I reported a case of hysterical blindness or amaurosis, and I have seen one additional case. Cases of total blindness from hysteria are decidedly rare, while those of unilateral blindness are not so very exceptional, although they are not very frequent either.

An interesting point in the diagnosis of these cases is one to which Dr. Gradle has alluded. Unilateral hysterical blindness generally is not difficult to diagnose. There are a number of tests which will enable us to determine the condition. Among them, the stereoscope, the use of red and green glasses with red and green letters, the box of fleas, and others with which most of us are more or less familiar; but the great difficulty is to determine whether a case is one of malingering or an honest case of hysterical unilateral blindness. In a few cases I gave it up; when I thought the patient was honest, I concluded it was hysteria, and when he was dishonest, I concluded it was malingering, and this was as far as I could get.

The use of the galvanic current is untrustworthy. While one whom we assume to be a malingerer would deny seeing the flash of light occasioned by the galvanic current and the hysterical patient would undoubtedly see it, on the other hand, the hysterical case may suppress the sensation of light caused by the interruption of the galvanic current just as he suppresses, in some peculiar psychic way, his vision of objects which he undoubtedly sees with the blind eye but does not recognize.

The two cases of total blindness which I have seen were both in women. One was a recurrent case, which had come and gone, covering a period of a good many years. In the other case the condition only occurred once, and was a great puzzle so long as it existed, because the case was one of hysterical pseudo-meningitis as well as blindness, and I must confess here I was quite at sea until I had examined the woman for an hour, when I discovered a small area of anesthesia, which grew bigger and bigger, so that finally the diagnosis was easy. This woman was very rapidly cured by means of hypnotism. She then developed other hysterical symptoms, and finally died as the result of an operation for the removal of a uterine fibroma, which the operator supposed to be the cause of the hysterical symptoms.

There is one exceedingly interesting and uncommon symptom or condition which occasionally has been reported, and which I have seen twice in unilateral hysterical amblyopia or amaurosis, and that is, dilatation of the pupil, with diminution or loss of reaction to light. I have no explanation of it to offer.



*A priori*, it could not exist, but the two cases I have seen were evidently *bona fide* cases which occurred in young girls. One pupil was fully twice as large as the other, and for three days did not react to light. The dilatation did not last long enough to have been induced by atropin, the effect of which does not disappear in two days. If Dr. Gradle has any explanation to offer for this phenomenon I should be glad to hear it.

One disease should be kept in mind as causing unilateral blindness, which is apt to simulate an hysterical condition, and that is, multiple sclerosis. Occasionally early in multiple sclerosis one eye will become nearly or totally blind, and occasionally both eyes, a condition which is more or less transitory. I have seen three cases of this undoubtedly due to multiple sclerosis in each case. Two of the cases were my own. There was no possible mistake about the diagnosis. The third case did not occur in my practice, but in that of another neurologist, and, although the disease was in its incipient stage, the diagnosis was clear; so that cases of blindness coming on suddenly and disappearing more or less quickly, without any ocular findings, are not necessarily hysterical cases.

It would hardly seem worth while to say anything about treatment if a physician had not recently told me how he was treating a case of hysterical blindness. He told me that he had on hand a case of hysterical blindness that he had been treating for a number of weeks. I said, "how are you treating the case?" He replied, "with bitter tonics and iron." Aside from the slight suggestion which may go with iron and bitter tonics, that physician might just as well have let his patient alone, because bitter tonics have no relation whatever to the cause and nature of hysteria. The treatment must be along the line of the production of the condition. It is the result of emotional influence or suggestion, and the treatment must be likewise, and the use of the faradic current is particularly good, as Dr. Gradle has shown, because it is painful. Perhaps a little better in the refractory cases is the galvanic current, because it makes a considerable flash of light when interrupted through the head.

I have seen three or four cases of hysterical amblyopia which were the result of an impression made upon the patient by a failure of vision due to beginning optic atrophy, just as a patient may have hysterical paralysis of an arm due to a real injury of the arm, or to a severe arthritis of the shoulder joint, or to a painful neuritis of the brachial plexus. An impression made upon a susceptible person by failure of vision due to organic disease may induce upon that organic basis purely hysterical amblyopia, and in a number of these cases I have within a few minutes made the vision twice as good as it was, with continued improvement up to a certain point, where the vision could not be improved, the difficulty being caused by organic disease. Gilles de la Tourette has reported just such a case as one of those mentioned by Dr. Gradle; hysterical amblyopia in a patient with syphilitic chorioiditis.

Dr. Gradle (closing the discussion):—Dr. Patrick has raised an important point, one perhaps, which I did not dwell on sufficiently, namely, the diagnosis. The diagnosis is by no means always a simple matter. In the first case I quoted, in which there was a sudden blindness of both eyes from a distinct shock of the emotions there could be no reasonable doubt from the history alone. When we deal with one-sided cases of amblyopia, not with complete amaurosis, the diagnosis is not so simple. We must, first of all, exclude actual lesions; secondly, we must get the patient well promptly by suggestion, or if we fail in this, watch him long enough to exclude any other disease.

In the second case I reported, the patient who was hit by a knob over the eye, had I seen the patient inside of three weeks, I might have thought there was severe damage done to the optic nerve from a fracture, but if within six weeks no atrophy was visible with the ophthalmoscope, one could exclude organic lesion.

In the case of the colored boy I could not raise vision above fingers at twelve feet, although the first day he had no vision at all. While there was a lesion visible in the interior of the eye, it could not be classified as an actual disease,

but simply as a malformation which would undoubtedly go hand in hand with somewhat reduced sight, but which ought not to interfere with a good field and good color perception. By suggestive treatment the boy regained the normal field and perfect color perception, but could not regain a high degree of central sight, which he had probably never possessed.

Insular sclerosis, as Dr. Patrick has said, is very apt to mislead the oculist, as it is likely to be complicated by optic defects in 50 per cent. of cases, many of which are not visible ophthalmoscopically in the beginning. Some indeed are never visible ophthalmoscopically, because the circumscribed lesion in the nerve is too far back; hence we must guard particularly against mistaking the lesion of insular sclerosis for functional disturbance in hysteria, and it is only a close analysis of the patient's general condition that will enable one in the majority of cases to make the diagnosis. But since the eye symptoms are at times the first and only manifestations of disseminated sclerosis for a long period, we would not be warranted in considering his derangement as purely functional if the patient does not recover normally under the influence of suggestion. In a very striking instance, I was once misled in my judgment for a long time by the influence of hysteria on the sight. It was the case of a young girl, with congenital syphilis, and an old retino-chorioiditis, which had reduced central vision only moderately, but had reduced her field very considerably. She had besides typical hysteria with many manifestations. I had her under observation for several years, and her field of vision was always very much contracted. She was a veritable museum of hysterical accidents and incidents, but it never occurred to me that her field was influenced by hysteria, I am sorry to say. She passed from my hands for a while; subsequently I examined her and found central sight was not improved, and perhaps even a trifle impaired by the continuance of the retired choroiditis, but her field during this period of therapeutic inactivity had expanded considerably. It was still a reduced field on account of the distinct damage done to the retina by the specific disease visible at the periphery. But it was not nearly as small as it had been under the influence of my repeated perimetric measurements.

The therapeutic efforts in my cases have all been of a suggestive character, aided only by iron and other hygienic measures where anemia seemed to be the basis upon which the hysteria was thriving. As to direct influences, one could not expect very much. My experience has been that in hysterical accidents or functional derangements of an hysterical nature, the influence of suggestion is all the more prompt, the more recent the occurrence. The most striking instance I mentioned was where a woman had total blindness which had only lasted over night, and the cure was instantaneous; while in functional disturbances of the eye, in hysterical aphonia, etc., my success has been much less satisfactory when the condition had lasted many weeks before treatment was begun.

#### *CHICAGO MEDICAL AND CHICAGO NEUROLOGICAL SOCIETIES.*

A joint meeting of these societies was held February 10, 1909, with L. Harrison Mettler, president of the Chicago Neurological Society, in the chair. The subject for the evening was a symposium on "Psychotherapy." Papers were presented as follows: "Psychotherapy from the Psychologist's Point of View," by James R. Angell, Professor of Psychology, University of Chicago. "Psychotherapy from the Physician's Point of View," by Sydney Kuh. "The Religious Therapeutic Movement," by Isadore H. Coriat, Boston, Mass. "The Medical Uses of Hypnotism," by Hugh T. Patrick. The symposium was discussed by Drs. Archibald Church, Oscar A. King, Julius Grinker, D'Orsay Hecht and Louis A. Derdiger. Adjourned.

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\* For papers and discussion see pages 487-512.

## CHICAGO MEDICAL SOCIETY.

A regular meeting was held Feb. 17, 1909, with the president, Alfred C. Cotton, in the chair. The subject for the evening was a symposium on "Acute Diffuse Suppurative Peritonitis." Papers were read as follows: "Etiology, Pathology and Diagnosis," by Bertram W. Sippy. "Prevention and Inhibition," by A. J. Ochsner. "Treatment," by John B. Murphy. "Sequelæ," by Charles Davison.\* The symposium was discussed by Fenton B. Turek and Victor J. Bacus, after which the society, on motion, adjourned.

## DISCUSSION OF THE SYMPOSIUM ON PERITONITIS.

Dr. Fenton B. Turek:—Scientific workers are beginning to realize the importance of associating experimental laboratories with hospitals and with clinical work; and the clinical facts that have been brought forward to-night are as important as an arra of protocols of pure animal experimentation. But it is the combination of these two factors that furnishes the most valuable data. In our laboratory experiments on animals, in shock and peritonitis, we found the degree of resistance of the animal of more significance than the virulence of the micro-organism. At the International Medical Congress, Paris, 1900, I presented experimental work showing that the injection of even virulent micro-organisms might be made into the normal peritoneal cavity without producing fatal results, but when the viscus was exposed to the air, injections of non-pathogenic staphylococcus albus produced general peritonitis, which resulted in death. Likewise an injection of the colon bacillus into the normal peritoneal cavity was negative, but peritonitis and death resulted from injections into the peritoneal cavity which had been exposed to air.

We observed that animals under prolonged chloroform or ether anesthesia also showed lowered resistance; and this lowered resistance is due to alteration in the blood serum, as shown by the behavior of the agglutinins, precipitins and lysins. How can we check this lowered resistance. By hyperemia. We excited hyperemia and caused alterations and changes in the serum with heat. We introduced hot water bags into the stomach. I was impressed with the importance of Dr. Ochsner's remarks when he referred to the use of lavage and hot water; and of the value of increasing the resistance as suggested by Dr. Murphy. We introduced small hot water bags attached to the end of a stomach tube into the stomach of animals to produce heat stimulation, which resulted in intense reactions, and these reactions exerted an inhibitory and preventive influence on general infection. Lavage of the colon with hot water produced similar reactions.

Even in animals with viscera exposed, after continued use the hot water produced a reaction hyperemia with changes in the blood serum, which enabled us to inject virulent micro-organisms into the peritoneal cavity without fatal results. We found that the serum of normal animals inhibited the action of trypsin, pepsin and other ferments, but when the viscera of the animals were exposed to the air for a certain period or the animal under prolonged anesthesia, the serum lost this inhibiting power, and also the resistance against infection of the peritoneum, but when the body temperature of these animals was raised by prolonged heat stimulation of the stomach or colon or by introducing small hot water bags into the peritoneal cavity intense reaction followed, caused changes in the character of the serum and then no infection after inoculation occurred.

I could bring out interesting points in reference to the precipitins, agglutinins, etc., but I have not the time at my disposal. This work can be found by referring to the literature relating to this subject which I have published in the *Medical Record*, August 11, 1900, and *Journal of the American Medical Association*, May 2, 1903. These experiments and our more recent work of feeding experiments in producing alteration in the blood serum with resulting peptic ulcer have a direct bearing upon this work that has been so ably presented to us to-night by these eminent surgeons.

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\* For text of paper see page 524.

Dr. Victor J. Bacens:—I am somewhat timid in facing such able clinicians as Dr. Sippy and the eminent surgeons, Drs. Ochsner and Murphy. However, after what has been said, I do not think that the majority of surgeons agree with the definition of acute diffuse suppurative peritonitis as defined by Dr. Murphy. He says that it is an infection of whatever origin which communicates with the general peritoneal cavity. In other words, the infection is not localized, but has invaded the peritoneal cavity. The word diffuse will vary in its meaning, according to the interpretation of the one who uses the word. For instance, in a perforative peritonitis secondary to a gastric ulcer the infection may be diffuse and yet limited to the upper half of the abdominal cavity; therefore it should not be understood that a case of this type should be reported as a case of general peritonitis cured by operative measures, for the infectious process is far more involving the entire peritoneal cavity. There is absolutely no means to tell with exactness how much of the general peritoneal cavity is involved. Dr. Yates' experiments on intraperitoneal diffusion throw much light upon these points. To illustrate: A patient was seen in the morning with a history of an infectious process of the peritoneal cavity, with the signs and symptoms of a beginning peritonitis of an unknown cause. We favored a diagnosis of acute ruptured gangrenous appendicitis on the grounds of a previous attack of appendicitis. The local symptoms were so vague as to be of no value. An exploratory laparotomy at McBurney's point revealed an appendix normal, with a milky exudate escaping from the wound. The latter was removed by gentle sponging, and soon bile was noticed to descend along the cecum. We were now obliged to explore the region of the gall bladder, duodenum and stomach. An acute round pyloric ulcer of the lesser curvature of the stomach was found and sutured. Both wounds drained. Perfect recovery.

Such a case should not be termed and reported as a case of general peritonitis, for although the infection had invaded the peritoneal cavity, the peritoneum still retained its color and luster, and only slight, thin, plastic exudate was seen here and there; in other words, the peritonitis was far from being established.

We now arrive at another statement corroborating the above view, after reading the literature and following closely what Drs. Ochsner and Murphy have said. I wish they would throw some light on the following: For instance, Dr. Ochsner states that in a case of gangrenous appendicitis, extremely ill, and when the infection has invaded the general peritoneal cavity, he does not operate, but puts the patient on absolute rest, gastric lavage if vomiting, nothing by mouth, rectal saline, and cures 98 per cent. of his cases. This is testimonial evidence that although the peritoneal cavity is involved by the infection, it is not a general peritonitis, or 98 per cent. certainly would not recover. Why, then, should we term and report cases with a similar infection or infection of other sources but of the same type and operated at once at the onset of the invasion of the peritoneal cavity as operative cured cases from general peritonitis.

A regular meeting was held Feb. 24, 1909, with C. W. Leigh, president of the North Shore Branch, in the chair. Fenton B. Turek presented a patient suffering from intestinal infection. Peter C. Clemensen read a paper on The Treatment of Traumatic Arthritis with Vaseline Injections. Discussed by Daniel P. Nelson, and in closing by the essayist. Charles J. Drueck read a paper on The Enema, Its Place in the Treatment of Gastrointestinal Diseases, which was discussed by J. R. Pennington, Fenton B. Turek, and in closing by the essayist. Max Reichmann read a paper on Diagnosis of Bone Lesions by Means of Roentgenograms, which was illustrated by numerous stereopticon slides and skiagrams.

#### DISCUSSION ON THE PAPER OF DR. CLEMENSEN.

Dr. Daniel T. Nelson:—I would like to ask Dr. Clemensen if he thinks this treatment would be of advantage in a little different type of case, where the interior of the joint is not only affected, but also the exterior, so that there is considerable enlargement about the trochanter and the neck of the femur?



Dr. Clemensen (closing the discussion): In reply to Dr. Nelson's question, where there is a large fibrous or bony formation around the joint which hinders its mobility, I should judge it would not be applicable. I have only applied the treatment in cases of chronic synovitis or arthritis which were not of an infective nature, so far as I could judge, and where there was no other injury to the joint, except pain and lack of general mobility of the joint.

#### THE ENEMA: ITS PLACE IN THE TREATMENT OF GASTROINTESTINAL DISEASES.

CHARLES J. DRUECK, M.D., Chicago.

In the preparation of this paper I have had a little misgiving lest the reader might think me a faddist on the use of the enema as contrasted with the virtue of other methods of treatment, but there is so much that is forgotten about the value of the enema that I feel I dare offer it as a subject for your consideration. It is a method that is always handy and within your reach in any household. Given properly, it is absolutely without danger or bad after effects and will never interfere with any other treatment of the patient. It is prompt and positive in its results. Its indications are found right along in daily practice from the restlessness of the baby as a result of an over-filled bowel to the saving of a life in cholera infantum or shock. This paper might have been labeled intra-colonic hydrotherapy because I want to call your attention to the use of the enema in its several forms. It is limited, however, to the indications for the enema in the treatment of gastro-intestinal disease, but I hope the reader will also see its value in the treatment of affections of the heart, liver and kidney. I shall submit nothing theoretical, but shall attempt to present a few facts about the varieties of enemas and the indications of each, what they should contain, and a word about the technic of administration.

#### THE ENEMA.

Let us first consider the simple enema such as is so commonly used to unload the bowel. For this purpose any form of syringe may be used and the water should be 95° to 100° F. This temperature causes the least reaction and peristalsis. The smallest quantity of water that will suffice must be used because the colon may easily be over-distended and the patient thus suffer irreparable damage. Large quantities of enema should never be used, as they produce atony of the bowel by over-stretching, just as atony of the anal sphincter is produced by stretching with the speculum. One quart of water should be the maximum, and where we wish to stimulate peristalsis one-half pint of cold water is better than a large warm enema. To increase the effect of the enema a teaspoonful of salt, molasses or soap may be added or one-half ounce of castor oil, glycerin or oil of turpentine. Any of these added to the enema irritate the mucous membrane, remove the mucus from the bowel and soften the fecal masses and thus aid a prompt evacuation.

In atony of the bowel when a large part of the enema is retained instead of being voided the colon may be stimulated to contraction by applying a cold towel to the abdomen and lower back. If this does not suffice the enema may be withdrawn by inserting a colon tube. An enema of a quart must never be allowed to remain in the colon, as it positively produces paresis, and, above all, never add insult to injury by injecting another quart before the first is withdrawn.

If there is a desire to prematurely expel the enema it may be controlled by pressing a folded towel firmly against the anus.

The simple enema to unload the bowel may be given with the patient in the sitting or recumbent position. In these positions the liquid is retained in the sigmoid and lower descending colon. Therefore, one quart is the maximum adult limit.

Always be careful in giving an enema not to introduce air into the bowel, as that stimulates evacuation and sometimes causes colic.

## COLD ENEMA.

By the cold enema is meant one with a temperature of 70° F. This much-neglected enema should replace the simple tepid one very frequently, because the cold water stimulates the bowel so much more powerfully that a much smaller quantity of fluid will serve our purpose. One-half pint of cold enema will unload the colon just as well as a quart of tepid water, and by stimulating the muscle wall leaves the sigmoid and rectum in a contracted and anemic condition instead of a relaxed and congested one. The cold enema by stimulating the intestines removes quantities of decomposing matter and toxins and increases the portal circulation. The reaction following the cold enema also produces a flow of fluid toward the intestine. In cases of chronic constipation or where hemorrhoids complicate the injection of one pint of cold water each day acts very well. The cold enema is also a very valuable means of reducing the temperature in fevers and in typhoid fever an excellent means of stimulating the liver and kidneys, besides cleaning out the colon. The water is introduced through the rectal tube and should be injected slowly, the reservoir being about one foot above the patient's pelvis, and retained ten to twenty minutes and then slowly let out through the tube and another quantity of cold water run in. This procedure is repeated two or three times without withdrawing the tube. It is well in some cases to begin the treatment with the first half pint of the enema at 90° F. and then gradually but rapidly reduce the temperature of the rest to 70° F. This helps the bowel to tolerate the enema and prevents its premature expulsion.

## HOT ENEMA.

The hot enema or irrigation is used in the treatment of inflammation of the pelvis. It increases the blood pressure and accelerates the heart action and stimulates the kidneys. The action on the kidneys and heart require a temperature of 110° to 120° F. An enema of 100° to 104° is of no use for this purpose. Following the hot enema it will often be noted that the patient voids a large quantity of clear urine. Kellogg places the hot enema superior to any diuretic drug in the treatment of suppression of the urine and Cantani and Wonte claim good results in the treatment of colic and infantile diarrhea.

## THE COLOCLYSTER.

The purpose of the coloclyster is to introduce a large amount of liquid without over-distending the bowel. With the patient on his back not over three pints can be passed into the colon safely, but in the knee chest or Sims position six or seven pints may be injected without inconvenience. This is especially valuable treatment of pseudo membranous colitis, catarrh of the cecum, atonic and chronic dilatation of the colon when they complicate neurasthenia, autointoxication and in collapse and shock.

## RECTAL IRRIGATION.

The chief advantages of irrigation over the enema is that a flushing may be given the parts. The first water introduced may be about the body heat and the latter rapidly heated or cooled as required to obtain the therapeutic results without causing sudden shock to the surrounding tissues.

Hot irrigation of the rectum and sigmoid is useful in inflammation of these structures or surrounding tissues, in rectal ulcer, spasm of the sphincter and in some gynecological affections. The water should be 100° to 125° F., beginning at 100° and raising to 125°. Normal salt solution (salt one dram to water one quart) is better than plain water to relieve local irritation.

I wish now to give you a brief outline of the therapy of colonic lavage in the treatment of a few intestinal disturbances to show the indications for the different forms.

## CHOLERA INFANTUM AND CHOLERA MORBUS.

In the treatment of these diseases a hot enema (110° F.) may be given after each stool to remove the irritating and infectious material from the colon and

reduce the frequency of the stools. To this may be added any necessary astringents, such as zinc sulphate 1 to 3 grains to a six ounce enema, or an equal strength of silver nitrate or lead acetate, or three drams of bismuth subnitrate. Where there is a great deal of gripping pain 2 to 4 drops of laudanum may be given in 2 drams of starch water. To reduce the fever give a cold enema as outlined above. For collapse give a large warm colocolyster of 100° F. and have it retained.

#### COLIC.

When the pain in the bowels is not due to inflammation but rather to pent-up intestinal gases or to enteralgia the hot rectal irrigation gives good results. Also in ovaritis and salpingitis. If, however, the rectal irrigation is not convenient, the nurse can give the hot enema. One or two pints of hot water is injected into the sigmoid and colon and retained for five minutes. It is then expelled and more injected. This is repeated three to six times. The whole treatment may be repeated two or three times each day. The rectal tip of the syringe will suffice and the rectal tube is not necessary. The patient rests on her back to prevent the water passing high up in the bowel. With the rectal irrigator the hot solution flows out continuously as it enters. It does not distend the tissues, but bathes all of the parts with the same temperature during the whole treatment. It is, of course, much more convenient for the patient and physician.

#### COLITIS.

To cleanse the bowel we use a quart of water at 110° F. containing one-half dram of sodium-bicarbonate and sodium-chlorid and flush out the colon twice daily. After each bowel movement give a simple enema at 98° F.

To relieve the pain and inflammation we give a cold enema at 60° F. to be retained five or ten minutes or a cold rectal irrigation. This procedure may be repeated hourly if needed.

The cold enema or rectal irrigation, or even the cold anal douche, acts very nicely in treating prolapsed and irreducible hemorrhoids.

#### CHRONIC DIARRHEA.

To lessen the congestion and stop the mucous stools give a warm enema at 98° F. and follow it with a tonic enema of one-half pint of cold water to be retained. To reduce the bacterial growth give one or two large hot colocolysters each day and follow with a small colocolyster of one pint containing gallic or tannic acid one dram. For the pain in the abdomen give a hot enema at 110° F. after each stool. For the alternate constipation and diarrhea give a large, warm, simple or soap colocolyster at 98° F. twice a week and follow with one pint of cold enema. The general treatment consists in toning up the general digestion by regulating the diet and by means of the enema remove the masses of feces and mucus and hordes of bacteria and with the small enemas containing gallic or tannic acid destroy the retained germs.

#### CONSTIPATION.

In the treatment of constipation the enema serves a great many different purposes, but it must be judiciously employed or it may cause more damage than good. Where the constipation is due to atony of the bowel due to loss of nerve sensibility the hot enema at 110° for fifteen seconds followed by the cold enema at 60° F. for fifteen seconds twice a day after breakfast and at night accomplishes a great deal. Or we may use the rectal irrigation. To increase the peristalsis the cold enema and the graduated enema by which the bowel is stimulated on a gradually lessening enema is of much use. We should always avoid completely emptying the colon, and also use a small, cold enema instead of a large quantity of warm water, except when needed to relieve autointoxication or to remove hardened or impacted feces. To remove fecal masses the hot colocolyster or enema of soap, oil or glycerin (glycerin one to water four ounces) should be used. The enema may have to be repeated several times and should be given every hour

until the bowel is thoroughly cleansed and then give a pint of cold water at 70° F. to tone the bowel. The habit of the warm enema must be avoided, and it is well to make it a rule to give a small, cold enema afterward to tone up the bowel.

#### TYPHOID FEVER.

The treatment of typhoid fever presents many indications for an enema, and yet I think it is many times forgotten. For the diarrhea give a hot enema of two or three pints and after it is voided follow with a cold enema of one pint. For the constipation which sometimes displaces the diarrhea and for tympanitis and meningitis give a copious colocolyster at 95° F. twice daily, and you may add yellow soap or one dram of turpentine. For the high temperature or delirium give a cold enema at 70° F. to be retained for fifteen minutes and repeat every three hours until the temperature reaches 102° F. But with a high temperature and a cold skin we have a different condition and we want the stimulation of a hot enema and the cold friction rub to the skin.

For intestinal hemorrhage give a rectal irrigation with ice water and two days after the hemorrhage has ceased give a cleansing colocolyster at 75° F. to remove decomposing blood clots from the bowel. Gastric irritation calls for the withdrawal of food by the mouth and the giving of nutrient enemas, but space forbids our taking up that subject here and we will consider it next month.

599 East Forty Sixth St.

#### DISCUSSION.

Dr. J. Rawson Pennington:—The use of water in the bowel, when indicated, is a valuable agent. The use of water in the bowel when it is not indicated is to be condemned. To advocate the use of water indiscriminately, so to speak, in cases of constipation, etc., is very much the same as the routine giving of calomel, cascara sagrada, salts, or many other agents that are frequently given for constipation. Constipation is not a disease. It is no more a disease than pain or fever is a disease. We all know that morphin is valuable in some instances for relieving pain, but what physician would think of giving morphin for all cases of pain? Quinin is good for treating some cases of fever, but no physician would think of giving it in all cases of fever. And the same thing is true with reference to the use of water in the intestinal tract, especially in the treatment of constipation.

Dr. Turck some years ago made a number of experiments with regard to the use of hot and cold water upon the musculature of the bowel, and I hope he will tell us about the results of that work this evening. It is my belief that massage should, as a rule, accompany the medicinal use of water in the bowel. Water is sometimes valuable in the treatment of proctitis; and also in sigmoiditis, colitis, pericolitis, with adhesions, and perisigmoiditis, but it should usually be used by a physician or competent attendant and be used in conjunction with massage. Then it may be a very valuable agent. But for the patient to use water as a routine in constipation, as is so frequently done, is a mistake. I have treated a number of cases of hemorrhoids that were brought on by the indiscriminate injections of water in cases of constipation. Moreover, it produces constipation.

The essayist tells us that we should not use more than a quart of water in the bowel at a time. That may be true. I may not know. But to my mind the quantity of water depends entirely upon the conditions for which the injection is given. I have in my hand, however, a circular from a member of this society, and a very able physician, too, in which he says that he uses from three to six quarts of water in the colon in flushing it out.

The essayist also advised the use of water for removing fecal impaction. It is often a very good agent for that purpose. However, one of the best remedies for relieving impaction of the rectum is to inject peroxid of hydrogen into the mass. This will dissolve it, and you will have but little trouble in having the fecal mass expelled.



Dr. Fenton B. Turck:—Some ten years ago I carried out a number of experiments on animals with a view to determining the influence of hot and cold water on the musculature of the bowel. These experiments showed that we could produce at once dilatation of the stomach in animals by the injection of water, and that the injection of water, which is a non-compressible substance, is prone to cause constipation. I have no doubt that if we were to take the ordinary healthy person, give him a douche-bag, and introduce a quart of water into the bowel every day it would make him constipated. We would make a constipated individual out of a normal one. There are times when it is necessary to empty the stomach by lavage, but no one thinks now of treating atony of the stomach by washing it out, because we thereby increase the difficulty we wish to relieve. Introducing water into the sigmoid flexure and leaving the patient to expel it increases the dilatation of the sigmoid flexure and rectum.

In 1897 I presented a series of experiments which showed the effects of hot and cold water on every part of the body; and in 1900 at Paris I presented my results from experiments on the effect of heat stimulation through the colon and stomach. These experiments demonstrated conclusively that it is not the water that accomplishes our purpose, but it is the heat in the water. A small quantity of water, say 200 c.c., introduced into the bowel would produce a beneficial one. It is the heat stimulation, therefore, that produces the good effects. We found that a beneficial effect could also be produced on the colon by cold stimulation; but care must be taken in using cold water not to leave it there too long, as it may produce shock. The principal point I wish to make is that it is not the water *per se* which does the good, but the heat and distention that produce the effect, and the withdrawal of the water. Again, we used air for the purpose of distention. If we wished to affect the entire cecum we would introduce air and exercise the entire colon back and forth, pressing on the abdomen over the colon so the air may escape through the tube, thus causing no pain, no distress following this treatment. By these measures we can relieve the impacted colon and overcome the infection I have previously spoken about.

In my earlier work we introduced the water in a bag, and sometimes air in a bag, so as to localize the distention. The gymnastic exercise produced by this method showed a remarkable effect in exciting peristalsis. The method used clinically is based upon experimental work on animals and I would like to especially emphasize the importance of not taking up this work empirically. It must be based upon scientific principles. This society is getting to be too old and its members too well informed for any member to resent such empiricism to it. I, for one, think that more scientific work is needed along this line, and whenever anyone has done sufficient work in connection with this subject let him present a scientific paper before this society, setting forth his results, and if there has been previous work done along the same line we must recognize it. This is a scientific body and has got beyond empiricism. It is time to take up subjects along scientific lines and present them from the standpoint of laboratory investigations and clinical observations.

Dr. Daniel T. Nelson:—In the use of water per rectum, or for washing out the stomach, the bladder, the eye, we should remember the nature of the cavity into which we pass this fluid. For instance, a two per cent. solution of salt, the saltiness of the tears would be pleasant for the eye, while plain water would be irritating, as also a larger per cent. of salt. I found a two per cent. solution of salt in warm water was not irritating to the mucous membrane of the nose, it being accustomed to the tears flowing into the nose, and to this solution many other drugs could be added if they did not increase the specific gravity too much. In 1865 and 1867 I made some experiments along this line. Some of you will doubtless remember that at that time the Thudicum douches were considered a sure cure for catarrh. Pure water is irritating to the bladder, but if you make the solution the specific gravity of normal urine you will find it is non-irritating. The rectum and colon are not accustomed to water, but to substances of higher specific gravity than water; hence an enema of the type

mentioned would be less irritating than either water or air. The stomach is accustomed to pure water, or nearly so, and may be washed out with that fluid. The specific gravity of the fluid that normally bathes these parts should be considered, it seems to me, in injecting water into any of these cavities.

Dr. Drucek (closing the discussion):—I am afraid that Dr. Pennington overlooked the first paragraph in my paper, when I said that I did not want to be considered a faddist on enemas. I did not mean to draw the attention of the society to enemas as a panacea, and, while I spoke about an indication or two in the treatment of kidney troubles, I do not think an enema cures Bright's disease; neither would I rely upon an enema in the treatment of typhoid fever altogether, nor cholera infantum. I simply meant to impress upon your minds a handy means of obtaining results in a large number of cases. I was not speaking altogether of the treatment of impaction because I have seen cases in which I had to dig out the fecal masses. I could not inject sufficient enemas or peroxid of hydrogen in these cases. I do not want you to think that I would use enemas in all conditions, but I do want to impress upon your minds that the ordinary enema consisting of one quart of water is not the whole thing in intestinal diseases, but that there is a variety of methods we can adopt, and it behooves us to consider, as Dr. Turck has said, the temperature effects of the water in some cases. I called your attention to the cold enema and pointed out where it was indicated in contrast to the warm enema. I told you that there were indications for the colocolyster of several quarts of water introduced into the patient's bowel, so as not to distend a particular part of it, but the water must be spread over the whole colon to get its flushing effect. I do not want any member to go away from here with the idea that an enema is a panacea, but I do wish to convey the thought that there are different varieties of enemata or different ways of introducing water with a view to obtaining certain results in the intestinal canal.

#### PHYSICIANS' CLUB OF CHICAGO.

A regular meeting was held at the Chicago Automobile Club Thursday evening, March 11, 1909.

Dr. William T. Beldfield acted as chairman for the evening. The subjects for discussion were: 1. "Business Partnerships in the Medical Profession." 2. "The Question of the Division of Fees."

The Chairman:—Some six or eight years ago a surgical practitioner in this city caused to be mailed to many of his colleagues a decoy letter. This letter ostensibly came from a practitioner in a country town, who had a wealthy patient requiring an operation, and whom he would send to the surgeon addressed, provided the latter would subsequently refund to the writer one-half of the handsome fee which the patient was prepared to pay. Quite a number of answers were received accepting the proposal. The author of the scheme then collated the experiences thus derived and published the substance thereof in a medical journal of wide circulation, omitting, however, the names of the writers. Just what was the motive of this gentleman in carrying through this scheme must remain a matter of speculation. Whatever the motive, the natural and inevitable result of this publication was to give a great impetus to the practice of dividing fees. Many surgeons in Chicago began to understand how some of their colleagues, who had not attained special distinction within the profession, had nevertheless acquired a large consulting practice in city and country. Quite a number of practitioners throughout the country began to see that they had been overlooking golden opportunities. There was only one thing lacking in the publication, and that was the identity of the surgeons who would thus oblige the practitioner; this created some difficulty in getting together.

A few years later this difficulty was removed through the thoughtful kindness of another surgical practitioner of Chicago. He repeated the decoy letter

trick, and having received a number of answers in which the writers agreed to the division of fees, this gentleman published these answers with the attached signatures in a leading daily newspaper of the city. Now the clouds were removed. Now, everybody knew just where he could get half of the fee paid by his patient to the operating surgeon; and the industry has flourished greatly ever since.

Probably no single episode degraded the *morale* of the profession more than did the first of these publications; probably no single episode created more popular distrust of the profession than did the second of these publications. For self-protection, if for no higher motive, the profession should definitely fix the ethical status of fee-splitting, which has undeniably become a common practice. It is either right, or wrong, or both.

The Physicians' Club this evening renders the profession a service by inaugurating an open discussion of this practice. And while its status may not be finally settled this evening, yet the necessity for its discussion is here proclaimed. Some resourceful country physicians have taken an advanced stand in the division of fees, which should also receive attention.

This was brought to my attention personally a few years ago by an experience which, no doubt, some of you have duplicated. I received a letter from a physician living west of the Missouri River to the effect that among his patients was a man who had a prostatic obstruction requiring operation. The patient had met with a series of misfortunes, including sixteen children, and because of these things he was not able to pay a fee; but he was willing to be used as a clinical case, and if I would take him on these terms he would send the patient to me. In due time the doctor sent the patient; indeed, he came with the patient. I found that the man really needed an operation, and sent him to the hospital for that purpose. On meeting him in the hospital I was rather surprised that he had not taken inexpensive quarters, as the father of sixteen children would be expected to do. He had a rather expensive room; he had engaged a special nurse. The doctor stayed in Chicago until the patient was obviously on the road to recovery and then returned home. Before the patient went home I ascertained these facts: The man frankly admitted that he was in comfortable circumstances; that when it became evident he must be operated, he had told the doctor that as a friend of his had been successfully operated on by me he wanted me to do the work. The doctor insisted, though in vain, that he should go to another surgeon whose name, by the way, figured prominently in the list of fee-splitters that I mentioned a while ago. Finally he told the patient that he had written to me asking what I could charge for the operation, and that I stated the fee would be \$250. Before he returned home the physician collected \$300, ostensibly \$250 as my fee and \$50 for his own time; but took it all with him. Learning these facts, I wrote to the doctor, telling him I could use that \$250 in my business comfortably. I received a polite reply to the effect that he was shocked and amazed to learn that a man in my position would advocate the division of fees. Now, I have lived in Chicago many years; I learned long ago not to buy the Masonic Temple for \$100; indeed, I feel reasonably secure in the company of the ordinary Chicago crook; but I frankly confess that when I go west of the Missouri River I wear my watch and money in my shoes.

After this experience it was very gratifying to me to see that our energetic secretary had selected to discuss the division of fees from the standpoint of the surgeon, not a guileless, gullible Chicago surgeon, but an up-to-date man from the country who can give us Chicago fellows pointers. Our secretary was fortunate enough to secure the presence of a gentleman whom we all know by reputation as a surgeon, an ex-president of the Illinois State Medical Society, whom I now have the pleasure of presenting to you, Dr. J. F. Percy, of Galesburg. (Applause.)

Dr. Percy then read the following paper:

## THE QUESTION OF THE DIVISION OF FEES FROM THE SURGEON'S STANDPOINT.

J. F. PERCY, M.D., GALESBURG, ILL.

Every year in a human life brings new experiences and a new point of view. This is true not only of each individual with his own little interests but also true of him when he is collectively associated with his fellows in the larger interests of society.

As I see it, the two greatest factors in our present day progress are science and ethics. The latter, however, has always been with us, while the former is a more recent development. Ethics has made necessary certain principles which are fundamental. The trouble with the fee-splitting proposition is that the most of us are not sure where it departs from the fundamental principles of clean ethics. The practice of medicine embodies within it both science and ethics and in larger measure than any other profession. Medicine as a science is greater than ever before and ethics is no shadowy thing. Society without ethics can do nothing in the way of generous progress, and I say this with full knowledge that no mean minority of our profession to-day are saying—"Ethics be damned." But we can not, I repeat, let go of ethics; the human civilized family will never and can never do this.

But the fee-splitting proposition in the mind of medical men is associated not alone with ethics on the one hand but with business also on the other. The point of view depends in large measure upon the character of the man and of certain environmental factors peculiar to the individual who from one standpoint or another is forced to consider this question. As I see it, our decision one way or the other must rest wholly on the question of whether good ethics in the present day will permit us to change our point of view without violating the fundamental principles of good morals. More than this, ethics is something that is inborn; it has a long start in our profession, and if the great body of medical men in this country can not pick out the variations of which the subject probably admits and at the same time not violate the true principles of real ethics then I alone could not hope to do it. To help in the clearing up of this subject is the explanation of my presence here. I want to state as a preface to what I have to say further on that I do not purpose to discuss this matter from an ethical standpoint, beyond what has already been suggested. If, when I get through, the ethical side does not show itself without words then I will have missed the purpose of this paper.

Again, and to further emphasize the real importance of this subject, permit me to say that some of my good friends in the profession have advised me not to appear as one of the essayists in this discussion. Their reason was that, regardless of what might be said or done in a meeting devoted to this purpose, the vice would go on just the same. But those who argue in this way forget or at least do not take note that the larger part of the medical profession is at heart honest. That the majority have an innate tendency toward being honorable. Practically all of the discussions that I have so far heard have considered only the fellows who were willing to give and take regardless of all consequences. These are the darkened spots and have been emphasized to such a degree that many are in danger of believing that the spots represent the whole.

The discussion again usually takes the form of representing the worst type of specialist who gives part of the fee and his counterpart among the general practitioners who receive the part that the other is very willing to give. There are, it is true, specialists who honestly believe that this is no crime against good morals or good business, and there are equally honorable general practitioners who believe the same thing. But I repeat the discussion of the question has gotten into the channel where neither of these men feel that they dare to discuss it without their motives being misunderstood and thus in danger of being classed with the spots already referred to.

Again there are men, both specialists and general medicine men, who believe that there are exceptional conditions over which they have no control but which



occasionally occur, where the division of the fee is the only just way, and at the same time they are careful that the interests of the patient are not harmed. These men also are prevented from bringing their honest thought to this problem for the benefit of us all because of the odium cast upon the whole matter by the few who are crooked in its practice.

Then again, there is the general practitioner whom this day finds advanced in years. He has toiled only as those can toil who have been in general practice until advancing years find him without money or any hope of any for the future. They have raised the families of their community as far as health was concerned and been content with almost nothing in the way of recompense. They see, not without bitterness, the children of their older families who now have money calling in the younger members of the profession when they are ill. These are the men who have been the altruists of the profession. They have kept alive and banded down its best traditions. Under these conditions, is it any wonder that these older men are willing to accept a part of the fee of the more successful money getting members of the profession on the mere condition of their collecting cases for them? This would not be a crime perhaps if the example of these men both as to the small compensation that they have received and their dealings with the fellow who will divide his fee with them was not passed on to the younger men who come to take the places of those who are older. The younger men are better prepared and eventually make better practitioners than the men were whom they succeed. Their education in this day has cost them a great deal more, but, at the very outset of their practice, they are handicapped by the small fees which generally obtain all over the country. Is it at all to be wondered at that the younger men soon ignore the altruism of the older men, forget it, and finally are found in the ranks of those who are practicing medicine for the money there is in it but not by legitimately increasing their fees?

There are two classes of these young men in their dealing with the specialist as far as the money getting proposition goes. With one the chief idea seems to be to get the work of the specialist at the lowest possible price. Their hope evidently being to be appreciated by their patient in inverse ratio to the lowness of the fee obtained for them. Then again this class seem to have a genuine interest in the financial success of their patients regardless of its effect on themselves from a monetary point of view. These are the men who without seeming to know it are following in the footsteps of their older competitors, who were always lenient with a patron struggling for a competence, forgetting that when it was secured they had everything and that the doctor who had helped them obtain it was practically forgotten, except perhaps with a few kind words. It will not be out of place perhaps to relate a recent personal experience. A young farmer, an only child and heir of parents who own nearly six hundred acres of the best of Illinois farm land, who is also in good mental and physical health, had a wife who required an abdominal operation. Nothing was said about the fee until after the operation, when the doctor informed me that this young man was a "renter" and that as a personal favor to him he wished that I would charge not over one hundred dollars. I learned after the bill was paid that the young man was a renter of his father's great and good land which he was eventually to own. Who was the greatest loser in this transaction, the surgeon who operated or the practitioner who suggested the fee?

The other type of physician is the one who is not yet old. He has been in practice twenty years. The last five years he realizes that his business is not increasing and that he is getting past the point where it is likely to increase. He has saved nothing and his family is to be educated. As a rule this man represents the average of the profession. When he is offered a part of the fee by the specialist it is not strange that he should find arguments that will suggest even if it does not entirely convince him that he should accept it. He will not confess to himself, although in his innermost soul he knows that accepting a part of the fee is an acknowledgment of defeat. That just in the degree that he does it, just in that degree is his individual initiative destroyed. I met one of these men in

his home not long ago. He is now sixty-five years of age. He has a brain that I believe is a great deal better than the average of us have. At sixty-five he had made his first trip on a tour of medical inspection, and out of curiosity merely, so he told me, he visited the Mayos. I asked him how he liked the work that he saw there and I was surprised at his reply. He dismissed the question with the remark that it was all right. But it was evident from his manner that there was something else on his mind and he expressed it in this way: "I have got a better brain than Will Mayo; but the difference between my brain to-day and that of Will Mayo is that he has made his brain work and I have not." "And," he added, "I am sixty-five and it is too late to do what I know now I once could have done." This man has always done the leading business in his community, but his work has been a result of his own unaided efforts. His office as I saw it was not much better than that of the shoe-cobbler who was his near neighbor. He has never brought work from other communities and the progress of medicine is known to him only in a fragmentary way. His children have gone from home and with one exception into other walks of life. One of the boys is a physician, but I learned from his father that he would not locate with him because he could not compete with his father's prices for practice. Without knowing it, this man is nearly the counterpart of the small grocery store that supplies some of the needs of the town along business lines. In the case of the doctor that I have just mentioned it was the acceptance of a condition over which he had control but which was wasted, and thus lost. Then we have the physician whose success in his professional life is no greater than the one just mentioned, but he will absolutely not split fees with any one. Indeed, he will even spend money that he can ill afford to spend to see his patient successfully treated.

The men just described do not represent all of the types that might be mentioned here, but they make up the majority of the profession and are the ones that should be considered in this discussion. They have failed to recognize their need of keeping step with the demands of their community for better service and as a result they are the real problem that our medical organizations have before them and of which the fee-splitting proposition is but an incident.

No discussion of the fee-splitting question can be complete without some consideration of the public. The public, like the physicians, can be divided into classes in their attitude toward this question. Time will show that there are but two of these. In the one class, and they are the minority, no attention will be paid by them to the fee splitting as between the family physician and the specialist as long as they have the idea that the former is getting only a part of the specialist share and that the latter is charging them no more than they would have been charged had there been no family physician in the case. The other class of the public, and they are in the majority, will look upon this matter as soon as they are informed of it as a form of graft, and the very name will have the same effect on them that it does on every reasonable mind. Indeed, if this question is not settled in some fair and above board manner I am convinced that some one will publish to the world the facts, and if this is ever done our profession will receive a blow, as far as the confidence of the public in us is concerned, that it will take scores of years to recover from. It will do for the public what Samuel Adams did in his "Great American Fraud" articles for the patent medicine business. A little incident illustrative of this possibility in its effect on the public occurred under my own observation within a short time. A physician of good practice but deficient in morals and of a grasping disposition had as a patient a wealthy old bachelor who died without heirs. The doctor's ledger account was honestly kept, but when his patient died the account was raised, as we would say in the case of a check. The bill was presented to the administrator of the estate and it was so far beyond what was expected that the case finally got into the court for settlement. The doctor's ledger showed up badly. He had written with a different ink between the original charges additional entries sufficient to bring the bill up from a little over one hundred dollars to between three and four hundred dollars. This of course was not allowed by the court. But the point I want

to make is that the four other physicians in that community in rendering a bill now are always asked to itemize it, something that was almost unheard of before.

This is a day of big things in business, and business has slopped over into the professions. More is demanded by the public in every line of human activity, and medicine is no exception. What hotel in town has the biggest business? What steamship the largest passenger list? The best of course. What hotel and what steamship have the next best business? Why, the next best hotel and the next best steamship, and this holds true on down through the list until we find the poorest hotel and the least seaworthy steamship doing the poorest business. However, medicine is not primarily a business, but some of the methods of business have got to be applied to medicine in order that it may do its greatest work. No man working alone in this day can encompass all of medicine, but if medical organizations can find some way of forcing the unwilling practitioner to dig for the diamonds that are under his feet, we will hear less of fee splitting. Fee splitting ignores everything in medicine but the business side of the question. I want to dwell on this phase of the subject. But let us first devote a word to how the thing commenced.

As I remember back over twenty years ago this is the story: In those days there were very few surgeons and they were all in the large cities. They had an immense following, not only in the city but for hundreds of miles around. These men trained their assistants, and finally, when these assistants finished their work under the masters, they too began to look for business. I have no time to go into details, but I remember that some of them offered a commission to me twenty or more years ago. After these men got the business they wanted, they stopped paying commissions as all of them do, because no one is going to give money when he does not need to. These men have left a lot of imitators. Beginning in the cities of the middle west, the practice has now spread in an ever widening circle until it embraces a majority of the places where attempts at surgery are made. It is fed by the ever increasing number of young men who have been internes or assistants to surgeons in the cities and who, seeing no chance for quick returns from surgery in the city, are going out into the highways to establish themselves in surgical practice. It is maintained by the misnamed post-graduate schools who give so-called special courses in surgery and other special lines of practice. These schools have taken the place of the old two year or two term diploma granting institutions of my day with this difference, that in the old days a graduate of the two term school who possessed a good brain was more or less conscious of the fact that he knew but little of the science of medicine. The gainer of a certificate from a special course in a modern post-graduate school is made to feel in the most subtle manner that is possible for scientific men with business instincts to make him feel that he really knows something of the special line which he has for a very few weeks pursued under their direction. This system again is made possible and is perpetuated by venal state boards of health who, by recognizing medical schools of low caliber, send out upon an unsuspecting public medical graduates who are not qualified by either training or experience to deal with anything but the most simple problem in the labyrinth of disease. As a result these licentiates find themselves handicapped in its management and finally when the bread and butter problem presses hard are soon found going halves with the fellow who, though of different training, finds himself also pressed by the same bread and butter question.

But even this does not complete the circle of this purely business proposition. The knowledge of it is not to remain with the profession but even now has begun to reach our patients. It is no uncommon experience for me to be asked how much an operation will cost if they come to me without the intervention of the middleman, in this case the general practitioner, their honored family physician. I was called up over the phone by a lawyer, a resident of my city, a few evenings ago. He told me that his sister-in-law had just had a diagnosis of appendicitis made by the attending physician and he wanted to know if I would operate and give the family the benefit of any commission that was in it for any one outside of myself.

In one of the cities of this state a surgeon has given up the fee-splitting proposition and has had it adroitly advertised that he will give the patient the commission that there may have been in it for the general practitioner. In addition to this his usual maximum fee for any surgical operation is forty dollars. His explanation and his excuse for the small fee is that the physician who sends him a case will not expect any part of it when it is so small. His explanation to the patient for the same fee is that what he might otherwise have been charged would merely go to the physician who referred the case to him for operation. Think of the elevating influence on the practice of medicine in that community when that patient gets out of the hospital and at home among his friends. In my own city we have a man who practices and has for some years, one branch of surgery. He was the first one in our part of the state to give a part of the fee to the physician referring the case. It worked for awhile, but of late he has been sending out cards to the laity on which, among other statements, is the one: "Your physician may not recommend me, because I don't pay commissions."

It is not many years ago that a prominent surgeon of Illinois would go down state in consultation in a medical case and while there operate on one or more surgical cases without charge. This statement of the case does not indite him very badly perhaps, but when it is known that the patient was a helpless paralytic and he was made to pay the greater part of the fee for the operations on the others which was left for the home practitioner to collect, it does not sound so well. The city surgeon took the big consultation fee from the paralytic who could pay it and gave him nothing in return, thus defrauding him, while the practitioner in the country collected all he could from the poorer people who were operated on. My part of the country is experiencing what it means to divide the fee in another way. A surgeon from Chicago, one of the younger men, it is true, comes down there, usually at night, and operates between trains, collects one hundred dollars and disappears after having received the fee paid him by the family physician. He operates on the diagnosis of the family physician who has had no special training either in the diagnosis or of the after care of these cases. But this is not the worst part of it. He comes at night in order that fewer people will see him and poses as the assistant of the family physician. It has been my misfortune to be called in one case sixty miles where this man had operated. My chief duty was to assure the family that all had been done that could be done because the patient was *in extremis*. I wish I had more time to tell of some other experiences that I have had with the cases of this man. Suffice it to say that this illustrates very well one phase of the fee-splitting proposition from the business side of the practice of medicine. I was interested to see in the March (1909) issue of the ILLINOIS MEDICAL JOURNAL, under the head, "More Fee-Splitting Axioms," the statement (No. 4) that "The surgeon may operate for and receive his fee from the family physician." The writer should have added "i. e., if you know the family physician."

Of late years I have been interested in watching the men whom I knew in the old days as givers of commissions. The real surgeons of years ago who are still doing surgery are, as I have stated, not giving commissions now. At least I have had no reason to believe for some years that they were, but the men of that day whom time has shown not to be good surgeons are still in the commission business in this city. But some of the men who are surgeons and who are not giving commissions directly do it indirectly. Some who are more or less in control of the hospitals in which they operate offer positions as internes to the physicians in the country who care to enter the hospital for that purpose. They are careful not to teach them enough surgery to do their patients any harm after they return home. But while the interne is in the hospital he writes to his wife or family to send the man all the cases that can be induced to come to the hospital from his home town. The result is to the great benefit of the surgeon and of course to the man who is serving as interne. He picks up a lot of useful information and his community is greatly paid for his work in the hospital. But it is another phase of the fee-splitting proposition only along legitimate lines. And yet in many instances it has worked harm to both the practitioner and to



his clientele because the less balanced too often get the idea that they can operate and their residence in a hospital gives the community in which they live the idea that this must be true, and as a result some very poor surgery, to say nothing worse, is done. One witty if not cynical physician has suggested to me that it would be well for the Chicago Medical Society to publish a daily bulletin of rates permissible for commissions for referred business and that it be placed in charge of the Chicago Stock Exchange.

But the question remains, "What are we going to do about it?" The first thing it seems to me is to decide the degree of the offense. The place to do this is in the organized ranks of the profession. This will crystalize the thought of the profession in an educational and authoritative way, and although education is a slow process it is a sure one. Agitations backed by resolutions which have the right reason for their existence will accomplish much. The general practitioner has got to be helped more by the specialist to get better fees for the work he does. He is treading the same pathway that we might have trod and we have no means of knowing the accident that prevented our positions being reversed. More than this, we have got to look to the general practitioner to give the greatest aid in the correction of this abuse. Without him we can do nothing.

Finally we must recognize that there are going to be fewer specialists both in the city and in the country. That the city specialist is going to do the work for his city if he deserves it, and this will be true also of the specialist in the country. Out of it all will grow a type of general practitioner greater than any that has preceded him. He will take the work of the hospitals and of the laboratories and distribute it among the suffering to their everlasting good. His knowledge of what those before him did which would not answer the cleanest demands of professional conduct will only come to him because of the memory of history.

#### DISCUSSION.

The Chairman:—Many years ago, when I was an interne in the County Hospital, gynecology was an exact science. That statement will seem less surprising to you when I explain that in those days women were not afflicted with so many gynecological affections as they are now. Pus tubes, ectopic gestation, and many other fancy diseases had not then been invented. Our patients had just four diseases—ulceration of the os, endocervicitis, endometritis, and pelvic cellulitis. The treatment of these women was equally exact and satisfactory. Three times a week they were taken into the treatment room, where the attending gynecologist sat before a table; on a stand at his right was a vaginal speculum (which, by the way, was carefully wiped before it was introduced into the next patient), a number of uterine applicators, and four bottles containing solutions; one of them was glycerin and tannin; one glycerin and iodine; one was just glycerin, and the fourth was silver nitrate solution. You may think there were four solutions because there were four diseases to be treated, one for each disease; if so, you are mistaken. There were four solutions because there were four weeks in the month. The practice of gynecology, as you can well imagine, was not specially exhilarating in those days, and the positions on that part of the staff were not in great demand. They were usually taken by ambitious young men who hoped to be promoted to the medical or surgical division of the staff. During my residence the gynecological staff received an accession—an ambitious young man, one who had already acquired a reputation for strenuousness. He soon tired of the routine of uterine applications, and presently steered into the hospital a woman who had an ovarian tumor. To the great surprise and scandal of the staff, he operated this woman; and to the still greater surprise and scandal of the staff, she recovered. In a short time he repeated that program on a second patient. Of course, that could not be long endured; so he was promoted to the medical side. While he was gynecologist to the hospital, he was likewise gynecologist outside of the hospital. He practiced gynecology on everything available. One day a wealthy gentleman came to his private office, seeking relief from an obstinate constipation which older men, who were not gynecologists, had failed to cure. From force of habit our hero directed the man to

arrange his clothing so as to expose the gynecological area, placed him on the table in the lithotomy position, and reached for his trusty vaginal speculum. Although the parts presented a somewhat unfamiliar aspect, yet he found an opening for the speculum. This soon struck an obstruction, which he naturally assumed was a prolapsed uterus. Upon further investigation, however (and in those days there were no partnerships in medicine, so he had to do this all himself), he found that the obstruction was not a uterus but a stricture of the rectum. He promptly dilated the stricture, cured his wealthy patient, and thus laid one of the many foundation stones of his fortune. I have often regretted that this young man's gynecological career ended so prematurely. I firmly believe that had he been allowed to continue his calisthenics with that vaginal speculum, the history of medicine would have been revolutionized. However, there is this consolation: Although he abandoned that specialty, he soon became and has since remained one of our most distinguished and trusted internists. The division of fees from the physician's standpoint will be discussed by one whom we all delight to honor—Dr. William E. Quine. (Applause.)

Dr. Quine said: Mr. President and brethren of the profession:—While we are deprecating the degeneracy of the medical profession in commercial and unworthy directions, it may not be inappropriate for us to stop a moment and analyze the conditions under which young men are introduced into the profession. If I know anything about the terms of the problem, I think I know that medical colleges are conducted on commercial lines; that they advertise the excellencies and the superiorities of their institutions just as industriously as do the commercial institutions of this city. They not only in times past have based competition upon commercial lines, but they have gone as far as commercial institutions have ever gone in the direction of sending out agents or runners to proselyte students of other institutions and attract them to their own; and if in addition to these conditions individual members of medical faculties have been engaged in the activities of the division of fees, it is not very surprising that medical students, who come to be more or less thoroughly acquainted with the facts, should enter upon the practice of their profession with very pronounced ideas in favor of commercialism.

A few years ago, when the exposure of the methods of fees, then and still in vogue, was made, I found myself perhaps one of the most ignorant and benighted of you all. I was in a rage of indignation for a while when the statements were very freely made and quoted in the newspapers that the family physician was the chief criminal in the division of fees, and that he, like a hungry dog, was waiting at the feet of his master, the surgeon, to receive whatever crumbs the master might permit to drop. It did not take a very long time, however, on the part of some of my surgical friends to convince me that there was very much more of truth in the statement than had come to my personal attention.

I am not able to see, Mr. Chairman, how it is possible to devise a plan that can be of universal applicability. So long as there are Halsted streets and Canal streets and Ghetto districts and Drexel boulevards and Lake Shore drives, and so long as there are men fitted by nature and by training for the higher functions of the medical and surgical profession, and other men unfitted by nature and by training to assume such functions, it is inevitable that there shall be inequalities in the emoluments of professional activity. If the only compensation to be derived from the exercise of our art is to be considered a money compensation, then surely there will be always enormous and irremediable inequalities. There are doctors and doctors and patients and patients. I have heard much said, and, indeed, I have truly believed it the greater part of my life, concerning the greed of the operating surgeon, who would take everything and leave to the humble family physician nothing that would compensate him for the drudgeries of his attention. And now, brethren, I have come to this conclusion, that our surgical friends are not less benevolent than the practitioners of internal medicine. I have come to the conclusion that I owe these surgical friends an apology for thoughts I had entertained and have always been ready to express with refer-

ence to their attitude in regard to compensation for professional service. Our surgical brethren and our specialists have led us, the internalists, to see the way. They have pointed the way; they have entered upon the way, and if medical practitioners do not enter upon the same way it is their own fault, and not the fault of their predecessors (applause), and I, one of the oldest of you all, have been chided many and many a time for being a cheap doctor, who charged little or no more for his professional services than his graduates of last spring. I have been chided that way. I have had friends call upon me in sweetness and gentleness and love of disposition and rip me up the back and cover the portion of my anatomy which I carry around to sit upon all over with corns and bunions because of my attitude in relation to this problem of professional compensation. Something depends on the way one was reared; something depends on the environment and conditions connected with his beginnings, and I have still, brethren, many and many and many an old, old trusty, who would come to me twenty-five or thirty-five years ago and give me a dollar or two when I needed it mighty bad, who are not able to give me more now, and I will not go back on such loyalty and fidelity as that for any person or for any purpose. (Great applause.) The physician renders valuable service occasionally (laughter).

I have in mind the instance of one of my dearest friends, operated on by one of my best beloved and most highly honored surgical friends for an appendectomy. The fee, a moderate one I now think, but which twenty-five years ago I would have regarded as highway robbery, was \$2,500. The same dear friend was afflicted horribly with tie douloureux. She had taxed the resources of the medical profession of Chicago. If I were to call upon you to name three of the most eminent internists in this city, and another three of the most renowned neurologists in this city, and if I were to ask you to name the most renowned men of Philadelphia and New York, you could not fail to name every one of those who had tried and failed to render this patient durable service. And finally, another doctor came along; you know him just as well as I do. He had recently returned from Europe and brought with him certain ideas in favor of the injection of alcohol into the seat, or approximately the seat, of suffering, and he cured the patient, so that the patient stayed cured and is cured now. That service saved that patient from a life of misery, of agony, of uselessness, and of awful care to the people of the house. It converted her into a happy, useful woman, who is actively engaged in the noblest benevolence. Is that service—a medical service—deserving of less compensation than an easy, uncomplicated appendectomy? The physician who takes a child, a driveling, slobbering idiot, who, by reason of absence of one of the organs of the body at birth, seems to be destined by nature to an awful life of idiocy and uselessness and distress and agony to every near relative, converts that apparently ruined life into a life of very active growth and development, and finally converts it into a citizen of ambition and intelligence and capacity to achieve, accomplishes a great deal. Is such a medical service in any respect inferior to the noblest surgical service that was ever rendered by the hand or the mind of man?

I have a very dear friend, a surgeon, with whom at times I have had little friendly collisions in diagnosis. On one occasion I was right. (Laughter.) I thought there was an infected gall bladder, and sent the patient to my friend. The patient came back with a note stating, "Dear Sir, I find nothing to operate on. It must be a medical case." The patient went back with a note from me saying, "Dear Sir, this patient has an infected gall bladder. Will you open and drain?" He replied in another note, "Dear Sir, I find nothing to operate on." I answered this note by saying, "Dear Sir, this man's gall bladder is going to be opened and drained. Will you do it?" "Dear Sir, I will do it on your responsibility." I took the responsibility. The patient was operated on; the gall bladder was infected, was opened and drained, and my surgical friend received \$200 for the operation, and I \$10 for the responsibility. (Laughter.) Do I blame my surgical friend? Not at all. He was right; I was wrong.

In the case of the very same friend, within a period of two years I called him to see a very sick and very wealthy person—a horribly dissolute person, who had spent \$10,000 or more in a week's debauch. It was a good diagnosis under rather difficult conditions; and when my surgical friend got through with the operation he took me aside into one of the rooms and said, "See here, that was a life-saving diagnosis; if you do not charge this man a decent fee, so help me God, I will advertise you, and I will denounce you before the medical profession of this city." (Laughter.) I asked him what he thought a reasonable fee would be, and he said, "\$1,000 or \$1,500 for the diagnosis." Well, I recovered from the shock, and told my friend I would think it over, and really I did begin to think over it, and I was getting to be just a little used to the idea of charging a thousand dollars for a diagnosis, when one of the nurses (there were six nurses employed in that momentous case) came over to my house; she had been in my own family as a nurse, and she was snickering when she came into my presence, and said, "Doctor, I have heard a good deal of gossip conversation over in the house, and I have come to say to you, that if you do not charge a reasonable fee for saving that person's life I will think you are doing an awful injustice to your family." I said to her, "Well, dear, what do you think a reasonable fee would be?" and she said, "\$2,000 or \$2,500." (Laughter.) The surgeon had said \$1,000 or \$1,500, and he is not slow in the matter of fees, and that began to appeal to me a little. (Laughter.) It really began to sound rational, and I compromised the matter by charging \$5,000. (Laughter.) I had heard before of some of the most eminent physicians in our community, who are not outranked by any on this continent, charging very handsome fees just for diagnosis, even when the diagnosis spelled for the patient hopelessness and despair.

We of the medical arm of our profession, as contrasted with surgeons, and as contrasted with specialists, seem to me now to be awfully, awfully slow. You come to me now, Mr. Chairman, or Mr. Secretary, with a proposition to devise a scheme where there will be an equitable distribution of fees, and the only solution I have is for the medical man to maintain the dignity and honor of his profession as his surgical brother does. The idea of me accepting as a benevolence from you, the surgeon, a portion of your fee! Your attitude toward me would be such as to regard me as a beggar hanging around your fee. Not on your life for me. I want the medical man to stand on his own feet and to fight his own battles, and to bid his surgical brother Godspeed, and let him of medicine hew his own way. It is perfectly true, that there are some physicians apparently intended by nature and possibly by training to limit their activities to the poorest of the poor of God's creatures, and, brethren of the profession, if I know my own heart, I love them and I honor them as much as I can love and honor the grandest and greatest of you all. They are doing their part; they are doing things that you can not do, and if you are doing more ostentatious and more lucrative things than they can do, I am not so sure that when the final balance of the accounts come, that your record will be so vastly superior, or so vastly more acceptable to the final judge of all our acts and all our intentions than theirs.

When I was a youngster in medicine, even before I had graduated, I had begun to ponder over the problems of medical ethics. Like my colleague to the left (Dr. Percy), I imagined, too, that professional ethics was professional morals; that is what it amounts to, and that it is a living and undying force. I pondered over the Code of Ethics many and many an hour. I read and read that revered instrument, which I still regard as one of the greatest essays on morals ever penned by the hand of man. It was easy to see imperfections in it and elements of truth that had outgrown their usefulness, but it was just as easy to see elements in it that can never die, and one of the features of that great, noble instrument that attracted the attention of my youthful mind, and has stayed with me and left its impress upon me and helped to guide me every hour of my professional career since, is this: "Uphold the honor and dignity of your profession." That is code of ethics enough for me; that is guide enough for me



when I am contemplating the problem of the division of fees. "Uphold the honor and the dignity of your profession." I know of no better way, my colleagues, to uphold the honor and the dignity of my profession than to uphold my own honor and dignity as a man, and one who is guided by such a concept as this honestly and sincerely in his relations to his patients, in his relations to his colleagues, and everywhere, is not liable to go dreadfully wrong in respect to any of the problems of commercialism that are now engaging our attention.

A few weeks ago I participated in what was called "a get-together meeting," the meeting consisting of representatives of the Chicago Medical Society and of representatives of the Pharmaceutical Association. It was a delightful affair. It seems to me that a get together proposition as effecting physicians and surgeons is an eminently desirable concept. I have not found my surgical brethren, when I had come down to an analysis of the facts, so unconsciously grasping and greedy for gold as I have supposed. I have many and many a time said to my surgical colleague, "The patient is poor; a larger fee than \$25 would be burdensome." I have said to the same surgical colleague, "The patient is rich, and neither you nor I is called upon to look out for his financial interests. He is able to pay a good fee." And I have said to the patient himself, "This man can give your child three per cent. better life prospects than any other man in Chicago, barring six or eight. Pay him like a white man for his services. What is \$500 to you, a millionaire, as contrasted with the feeling of security you have when you know that you are commanding the services of one of the most expert and thoroughly representative members of the profession?"

My medical colleagues, I know of no better way of dealing with our friends, the enemies, that is, the surgeons, than to be absolutely dead straight with them. Tell them the circumstances of the patient fairly; tell them when the patient *is not* able to pay, and when the patient *is able* to pay, and I have yet to find one surgeon in this city who hesitated or appeared to hesitate for the fraction of a second in accepting my statement as to the financial responsibility of the patient. I would deal with surgeons as I would have them deal with me. I do not ask a surgeon to look out for my financial interests. I am dreadfully, dreadfully sorry that I was not born twenty-five years or so later than I was. You know, I am a sort of connecting link between the past and the present—the link that connects you around this board with the revered Davis, the first, and Byford and Andrews and Lyman and Ross and Adams Allen and Gunn and all the rest of those who have preceded us. I drew my ideals from them, and it has not been easy for me to stop and contemplate with average intelligence the progress of evolution in the various departments of my profession. I think my surgical brethren and my brethren engaged in specialties, and, above all else, some of the best known and most highly honored of my internalist friends, under the leadership of Billings, have shown me and are showing you how to uphold the honor and the dignity of your calling by placing a dignified estimate upon the value of our professional services. (Applause.)

Dr. Henry F. Lewis:—I fear I shall be a disappointment. I can not give you the logic and business acumen of Dr. Wood, I lack the wit and humor of your chairman, I am unable to read you a sermon like Dr. Percy and I can not soar into the empyrean with you like Dr. Quine. Therefore, let us get down to earth, even, if you please, with our feet in the mud. Dr. Quine and other speakers have told us about the rewards of the profession not expressed in money. We know these rewards as well as anybody else. There is more satisfaction in taking care of a poor man who twenty-five years ago only gave us a dollar a visit, and who, perhaps, is unable to pay more than that to-day, than in taking care of the millionaire debauchee who is able to pay \$5,000, and we all do our share of it. Money is not the greatest part of our profession, for if we were in the profession for the money there is in it we would be such fools that we would not make any money. But money is a part of it, and we must have it.

The baker sends me a bill every little while; the milkman and the groceryman do the same. Again, I have my rent to pay, or the interest on a mortgage to pay on my house, or have taxes to pay when they come due; hence it is very important to look after the financial side of our profession. We all need money to meet our various obligations, and there is no harm in talking about it. We are not in the medical profession entirely for the love we have for the work; we did not go into it with that idea. Some of us were foolish enough to think we could make something out of it and get wealthy. But there are only a few surgeons and some distinguished medical men who have made or are making large fortunes out of the practice of medicine and surgery. We should not be ashamed to discuss this money question. We owe it to our patients to give them the best we have, and the man who does not do this is an ingrate. He has no right to be in the profession. Such a man is not to be considered. We owe something to ourselves and to our families. Butcher's bills, baker's bills, etc., are getting higher; but our bills are not higher. We do not charge any more for our services. There are not many men in the profession who charge one thousand dollars for making a diagnosis. There are very few who would get it if they charged it. The patients whom we charge, say, \$100 or \$125 for an appendectomy, are composed of the ordinary people like ourselves, who are struggling along to make both ends meet. With small fees it is impossible for the physician to become wealthy. When we die the chances are that we have nothing left but life insurance for the members of our family, and in most instances we have had to struggle to pay premiums on that. When our patients have appendices that need removal, or diagnoses that need to be made, they should be charged a proper fee, and most of them will pay it. We must charge for our services, as we have to pay our debts the same as other people, and we should not be ashamed to consider the financial side of our profession.

How shall we divide these fees? One of us will get one fee, while the other will get another. We will do work together in a great many cases. Suppose we have a partnership. The patient who knows that this partnership exists is going to pay a proper fee, and that fee will be divided among the men constituting the partnership. We send our patients to specialists for several reasons. In the first place, we send them to specialists because they are good men for the particular cases we have in mind. Of course, there may be half a dozen or more men who are just as good and as skilful as they. There are twenty or more surgeons in this city either one of whom I would just as soon select to remove my appendix as the others. Personally, small things would influence me. For instance, the practitioner whom I wished to consult in a given case might be nearby, although there may be several others equally as good in the vicinity of my office. Such a thing as that would influence me. There is no one man who can do any one thing better than any other man. There are some men who think they can. If there were partnerships in general in the medical profession there would not be occasion to send many of the patients out of our offices across the street to some specialist. In entering into partnerships we should see to it that the men in that particular office are equal in ability and skill to those found elsewhere. We are sometimes influenced in referring our patients to a specialist because he is in the same suite with us. There may be two or three equally good men across the street to whom we could send these patients; but we do not see these men so often, and naturally we do not send our patients to them. There are a lot of these things that might influence us, and they are perfectly proper.

Another question that comes up is whether or not partnerships in medicine shall be permanent or temporary. Why is a permanent partnership any more ethical than a temporary one? We often enter into temporary partnership. The fees are divided in such cases as have been referred to, as, for instance, in the case of the millionaire mentioned. It was not considered a great crime for each of the two doctors in this case to charge a proper fee. I have known a great many distinguished men in the profession who have decided on what the total

fee should be in a given case, and they have divided it. They have sent separate or joint bills, and have collected the money in that way.

Coming to the consideration of the question of commissions, why is it any more commercial for us as physicians because we are physicians to give commissions than for the men in other lines of business? Why would it be wrong for us to give commissions any more than it would for a business man to do so? Have we a set of morals that differs from that of anybody else? Are we holy people? Surely, we know many, many doctors who are not holy, who will cry out the loudest and say it is a terrible thing to give commissions; that it is a crime, and all that sort of thing. I remember very well the decoy letter that was sent out and the attitude the profession took on it. The parties who sent around these decoy letters set out to expose the villains. But what became of these parties? What did they get? You know. What did these terrible men get who were caught? I do not think any of them died of the punishment inflicted on them. Some of them are very high in our medical societies to-day, both national and local. Those men have not lost prestige, yet we know they were caught. Some of us were not caught. I have felt personally aggrieved at the instigators of these letters because I never got one. I thought that was a great reflection on me. (Laughter.) I never got one, so that I did not have a chance to come out in the limelight and denounce them in the papers; nor did I have a chance to advertise that I gave a certain percentage of fees or what not. I got left on that entirely.

It is all very nice to talk about the altruism of the medical profession. I have not read any of Zola for a long time, but if I remember correctly, he relates a story of a doctor who practiced his profession in a small country town in France, who never charged anybody anything, who never sent bills, who never asked for money. He had a drawer in his desk in which he put whatever voluntary contributions were made to him. When he wanted any money, he took it out of that drawer. It was not long before he went to that drawer for money wherewith to pay his ordinary expenses and found there was nothing in it, and there will not be anything unless we look for it. The laborer is worthy of his hire, and he ought to get a proper wage. The medical profession is becoming more and more commercialized and organized, but not in a sense that is necessarily shameful. Organization is of advantage to the profession. If there is no moral obliquity in doing what the lawyers do, what the architects do, what the other learned professions do, then there is no moral obliquity on our side. I do not say that every surgeon or consultant has got to give a certain percentage, and I am in accord with what Dr. Quine has said, that, bad as it may be, it is not a terrible crime to do it. It is done more frequently than a great many of you think or believe. There are men in this room looking at me now who do it. There are men who talk everlastingly against it who do it. Are the men who do it cloven-hoofed? There are good things to be said on the other side, and you will hear more about them before this discussion is closed. The other fellow is entitled to some part of the fee. If a patient is able to pay a certain sum, the question arises, what is the normal fee? Some wise man once said in Chicago that the normal fee is the maximum fee; but it is seldom we get a normal fee; it is usually a subnormal fee we get. If some one makes a diagnosis he has done the patient a service. Even if he has not gone so far as to make the diagnosis but has persuaded the patient to be operated upon, he has done a service to that patient, perhaps not equal to that of the distinguished surgeon who operates. Nevertheless he is entitled to pay for it. He can not get that pay if the surgeon has got his fee, because there is nothing left. We must remember that while the medical man sends cases to the surgeon, the surgeon sometimes sends cases to the medical man. The ordinary practitioner has got to look out for some of the rewards in this world.

Dr. Charles L. Mix:—I have been guilty of dividing fees, but I could not help it. On one occasion a physician in this city brought me a patient and asked me

to look him over, which I did. When I finished the examination he asked the patient to step out, as he wanted to see me for a minute; and he then handed me \$10 for my fee, saying the man was so poor that that was all there was in it so far as I was concerned. The same thing happened on another occasion, where a physician up in Wisconsin brought me a patient, and again I was compelled unwittingly to divide a fee.

I do not think any of us would divide fees unless we were compelled to. When we come down to the meat in the matter, we divide fees only because we want business. If you know an excellent diagnostician who does not do very much consultation work, the probabilities are that he does not do very much fee-splitting. If he is a good internist, or a good surgeon, and does not have as much to do as he ought to have, the probabilities are that that individual is running things on a sound ethical basis.

This whole question of division of fees, I think, has grown up largely, as Dr. Quine states, on account of the asinine character or qualities of the ordinary physician. I do not think the surgeon can be accused of having these asinine qualities, but I am certain the ordinary individual practicing medicine in the ordinary way possesses them. Nearly all of us to this day render our bills on the visit basis. There is not probably 5 per cent. of the men present in this room who, in making up their accounts, set down a definite amount for the diagnosis of a case that they have treated for some length of time; and then another definite amount for the laboratory work on the case, and still another definite amount for the time consumed in the care of the case. What we all do in cases of typhoid fever, pneumonia, scarlet fever, etc., is not to render a bill for a lump sum, but a bill, for instance, for \$67, instead of the \$100 or \$150 which we should get.

It is just as important for the internist who treats a case of pneumonia to get a good round price for his services as it is for the surgeon who in fifteen minutes' time or less takes out an appendix and allows an interne to sew up the abdomen. The care of a case of pneumonia entails a great deal more responsibility than is assumed by the surgeon in taking out an appendix in which the mortality, at present, is practically *nil*, even when the operation is done by men who have been out of college only one or two years. Many of us do not charge enough for the responsibilities which we assume. As Dr. Quine stated a while ago, he assumed a certain responsibility for an operation on a given gall bladder. He implored the surgeon to do the operation, and he succeeded in getting only \$10 for his diagnosis.

In France there was a good deal of talk upon this subject at the mid-summer meeting of the Congress of French Physicians, held at Lisle in June of last year. One of the main topics for consideration was the subject of fee-splitting or dichotomy, as it is there called, the history of which it is unnecessary to go into at this time. It is enough to say, that precisely the same conditions have obtained in Paris for years as have obtained here in Chicago; that certain men there were getting rich by work which they got by commission-paying, while other men far more capable than they were earning not much more than sufficient to meet living expenses. The sum and substance of the whole discussion simmered down to about this: Fee-splitting is a necessary evil. It will never be stopped in this world any more than the most ancient trade will ever be crushed out of existence. It is a part of human nature to split fees. We all do it. I say "we" in the editorial plural. We do it when we are young and when we need business, and when we get older and more independent, we stop.

Inasmuch as this evil is bound to exist, let us, if we can, do away with it in another way. The method adopted in France is to render in every case of this sort a joint bill. That joint bill is sent in by the surgeon and by the family physician, and the joint bill is collected. It states on the bill that it is a joint bill, and the patient is charged no more than a patient should be charged. By having a joint bill rendered, which can be itemized, if necessary, there is no onus



put upon the medical profession by the patient. The patient knows at once that he is paying no more than he would have to pay in any event, and it simply leaves the two men, as Dr. Lewis has said, to form a temporary partnership in that individual case to divide the fee the way they want to. This is a perfectly equitable and a perfectly logical way of handling the situation. If all of us would get into our heads that diagnoses are worth sometimes quite as much as operations, it would be a good thing for us.

About two weeks ago I saw a case of intestinal obstruction of the acute form (every one of you can parallel this instance) in a woman. She was taken sick at about six o'clock Sunday night. I saw her on Wednesday. No operation had been suggested, though the case was thought to be possibly one of gallstones. There was a scaphoid abdomen, instead of a bulging one, with a lot of meteorism. In this case the diagnosis was the whole thing. The family physician did the operation. When the patient was taken to the hospital the obstruction was found in the region we had mapped out for it. The operation consisted in snipping a band of peritoneum that had fastened together a couple of loops of the bowel and had imprisoned a part of the small intestine near the cecum. The operation was exceedingly simple, and in that case there is no question that the services which I rendered were as great as the service the surgeon rendered, yet my bill was one-third the surgeon's bill. If on any occasion the internist has nerve enough to send in a bill which is proper, and my diagnosis in this case was worth exactly as much as the surgical operation, he won't get it. Patients won't pay such bills. They say the diagnosis is not worth as much as the operation. They usually say it is worth only about one-eighth as much as the surgeon charges. I know this from experience, and perhaps some of the rest of you do. In these cases we have to do the best we can, take the best fees we can get; but if we will get together and when we render bills make separate charges for diagnosis and for treatment, we will get nearer reaching a solution of the problem. And the surgeons can help us. Let us take this proposition: Suppose I make a mistake in diagnosis, the surgeon operates, and finds I am wrong, and he makes the diagnosis, he is entitled to the whole fee. I do not deserve anything. If, on the other hand, I make the diagnosis and the surgeon operates, I deserve as much as he does. When a surgeon renders a bill, let him say on it diagnosis \$150 and operation \$150, total \$300. If that is done the public will become educated, so that the medical man will get his share. Surgeons may not wish to do this; they probably will not, because it will be harder to collect the bill. The patient will say, "\$150 for the diagnosis and \$150 for the operation! Not on your life! This diagnosis is only worth \$10." It is on account of this that trouble arises.

I do not see any hope for us as internists until we educate the public as to proper charges for diagnosis. When we do that, there will not be any more talk about fee-splitting. The family physician wants one-half of the apple and he can not get it under the existing state of affairs, because the patient won't give it up. Patients will not give it up because they can not see the relative importance of diagnosis as compared with treatment. I think every bill which is rendered by a surgeon ought to have upon it three charges, one for diagnosis, one for operation, and one for after-treatment. If the doctor who sends the case makes a diagnosis which is found at the operation to be right, he should get one-half of the fee as a diagnosis fee. If he takes care of the after-treatment himself all alone, he should get all that, and the surgeon should get the other part of it. If the surgeon does all three things, and the physician who sends the case is dead wrong in his diagnosis, he does not deserve anything. But he should have the nerve to say what is his just due when he makes a proper diagnosis. That is my position on fee-splitting, where the two physicians split the fees equitably and rightly. If the internist makes a diagnosis and it is a life-saving one, he deserves as much for his diagnosis as the surgeon who operates, for in the vast majority of cases it takes more time to make the diagnosis than it does for the surgeon to do the operation. This is a common sense view of the situation as I

see it. If, as an outcome of this meeting to-night, all of us can decide individually and collectively to send in bills on the new and better basis, it will not be long before the country physicians will not have to divide any fees. It will not be necessary; he will get what is coming to him without any subterfuge, and the patients in a short time will be educated both by the internist and by the surgeon.

Dr. John A. Robison:—When I commenced the practice of medicine, I entered into a business partnership, and I may claim to be a second link, because my teachers were Gunn, Ross, James Adams Allen, and so forth. But the business partnership I entered into was of a personal nature rather than a cooperative scheme. I believe a business partnership is a good thing for the young man, and a better thing for the old man, because he can turn a whole lot of poor work on the young man and get money for it, and the young man gets the experience and very little of the money. But the idea of a business partnership appeals to me very much, for several reasons. In the first place, I do not think there is any doubt but what patients receive greater benefit from team work than they do from individual work. You see that exemplified every day in hospital practice, especially in the work among surgeons and internists. A patient enters the hospital, receives the attention of the chief physician or surgeon, and then the interne or internes make investigations; laboratory examinations are made, and the result is, if the case is at all an obscure one, in the course of a few days a proper diagnosis is made. I think the same principle carried out in private practice would be very beneficial to the patient, and it is certainly as beneficial to the men who enter into these partnerships. But I do not think a partnership idea should stop just there.

Some years ago, if I am not mistaken, the idea of forming branch societies of the Chicago Medical Society was instituted by Dr. Evans. It seems to me, there has been no factor in Chicago medicine in the last few years which has developed so much of the *esprit de corps* among the profession as these branch societies. We meet together; we get acquainted with one another. We find that Dr. Brown, Dr. Smith, and Dr. Jones, whom we looked upon as rivals, and of whom we have been suspicious, are good fellows, after all, and just as honest as we are, and it would be a good thing if we could carry business partnerships a little further, and each one of us, when we have these branch meetings, discuss these problems of the practice of medicine, and let us strive to help one another in our practice. In the branch societies we have surgeons, gynecologists, other specialists, and the general practitioner, and it seems to me, therefore, in this discussion we should not simply discuss how a business partnership would affect a few members of the profession, but a method whereby the greatest good would be done to the greatest number. Perhaps it would be somewhat schematic to consider this question, but it is a point that might be brought up in our branch societies and there we can discuss the fee-splitting proposition.

In regard to medical fees, I think the profession is very much behind the times in its methods of conducting its business, and that is one reason why so many of us are finding we are not doing the general business we should be doing. There are, I understand, in the city of Chicago three hundred and fifteen charitable organizations. These charitable organizations are spread all over the city. They have their nurses; they have their visitors and men who go about the city and hunt up cases of sickness and destitution among the poor. The Visiting Nurses' Association visited over thirteen thousand patients last year. They went into the homes of people where they taught the principles of hygiene, where they taught personal cleanliness, where they taught measures for the prevention of disease. In reading the monthly bulletins published by the City Board of Health, and noting the work that has been done by the medical inspectors of schools, I have been surprised to find how many children have adenoids; how many children are suffering from hyponutrition, tuberculosis, diseases of the eyes, ears, and developmental diseases. Now, if these medical inspectors can find so many cases of disease among children, are we as practitioners doing our duty

toward our families? Should not the family physician find these things out? It is here that the education of the family comes in. Therefore, you can incorporate in your bills charges for the work you do for the family in preventing disease and saving your patients' money.

Some years ago I happened to be interested in a lawsuit which lasted a few months, and at the end of the suit I received a bill from a lawyer for \$5,000. The bill was itemized somewhat like this: Attendance at court, six days, \$900. But the case was one which had extended over quite a little time, and I wondered where that lawyer got his \$5,000. The bill comprised quite a number of pages. It further stated, January 2, two hours consulting authorities, \$10; January 3, interviewing witnesses, four hours, \$20; January 5, looking up paper in some court, \$10. That is the way the bill grew. And that is the same way your bills may grow, too. When you render a bill, do not do so at two or three dollars a visit, but if you have a case in which it is necessary to make a physical examination of the patient, charge for that examination. If you make a *Widal* test, charge for that. If you make an examination of the urine, charge for it, and I do not think it would be a bad idea if sometimes where we have to consult a medical text-book to charge even for that. (Laughter.) But, anyhow, I believe that you are neglecting your duty as physicians by not extending your work over the entire life of the patient, not only when the patient is sick, but when the patient is well. The Chinese idea of people paying the doctor when they are well is not a bad one.

In regard to the fee question, I do not see why there is any necessity for us to talk about the division of fees at all. The amount of money a practitioner makes depends a great deal upon himself. I know one practitioner on the west side who is making twelve thousand dollars a year at \$2 a visit, \$1 for prescriptions in his office, and \$10 for confinement cases. I know another man a few blocks from him who is making about \$8,000 a year with less effort; I do not know that he has any better class of patients, but he charges more for his work, and so a great deal depends upon the individual man. If you find work, and you will find work if you do your work right and give the best service to your patients, I do not think there need be any question about the division of fees.

Dr. J. W. Pettit, Ottawa, Ill.:—I have been much interested in the discussion of this question which has been going on in our *State Journal* for several months, and I must confess to much confusion as to the right and the wrong of the division of fees.

Much has been said in this discussion of the evils, but only incidentally have the speakers touched upon the causes. Those who have come nearest touching the fundamental causes in my opinion are Drs. Quine and Mix. It occurs to me that the whole trouble lies in the fact that the surgeon and other specialists have educated the public right and that there has been an utter lack of education of the public on this question by the general practitioner. Added to this is the cowardice of the general practitioner in failing to demand his rights. The evil which now confronts us has grown up so gradually that it is somewhat difficult to trace the beginning. I interpret the situation in this way. At one time we were all general practitioners. In those days we did everything and one branch of our practice was not regarded as worth more than another. Fees were necessarily low. Specialists one after another sprang up and the public was easily educated to the idea that the services rendered by the specialist was worth more than those of the general practitioner because the specialist presumably rendered a higher degree of service. This was probably true. Specialists in surgery set the example of charging greater fees than could be obtained for the same service by the general practitioner. As other specialties grew up this precedent was followed and the public and profession both recognized the justice of it. This process has gone on year after year until now pretty nearly everything is specialized and the general practitioner is left standing about where he was forty or fifty years ago. He has been standing still while the world moved on. Conditions have changed but his fees have not.

I have been about the state a great deal in the last year. It has been my privilege to study conditions as they exist. I find that the men whom I meet who for the most part are general practitioners are receiving the same fees to-day that obtained fifteen, twenty or even thirty years ago, and in many instances less. This notwithstanding the fact the cost of living is 50 per cent. higher than it was a few years ago. This as a result of the increase in the cost of conducting our business. The result is that medical men are feeling the pinch everywhere. The specialist and particularly the surgeon has recognized that the general practitioner is not receiving what he ought to have, and out of the goodness of his heart oftentimes undertakes to equalize the fees by dividing with the general practitioner. This has been done in the most honorable way and with the best motives, and could the practice be confined to this method perhaps there would not be much to complain of. The precedent, however, is a dangerous one, for the reason that it opens up opportunities for fraud which many unprincipled men have taken advantage of; hence we class it as an evil.

Another fundamental reason is that the general practitioner is a coward in not demanding his right. I know because I am one of them. We have all recognized for years that we were not receiving just compensation for our work and as a body we have been too cowardly to correct the evil.

For many years surgery has overshadowed internal medicine. Now internal medicine is coming into its own. It is also a specialty, and if I may be permitted to say it, it requires a higher degree of skill to be a good internist than to be a good surgeon. Let the internist demand his own, as the surgeon and other specialists have done, and the justness of his claim will be recognized.

The burdens which the general practitioner has placed upon himself by accepting inadequate fees is the result of the faulty education of years, and we can not expect to remedy the evil at once. It will take years to regulate it. This is one of the problems the organized profession must solve. It can and ought to be done. It has been done in many places, and can be everywhere, if medical men will only stand together. The general practitioner has no right to complain of the specialist because he gets larger fees. The specialist gets the larger fees because he demands them and stands for his rights. The general practitioner who makes a diagnosis, recommends an operation, selects the surgeon, assists in the operation, and who usually has the after care does much more work and accepts certainly one-half the responsibility and should be paid proportionately. As a rule he gets little or nothing for such service. The specialist gets all of the fees and the glory as well. The general practitioner has placed too low an estimate on his services. This is all wrong. The evil has now grown to such proportion that it can only be righted by a full, free and fair discussion such as we are having here this evening, and then by a concerted movement of the organized profession which shall take concrete form by a large and representative body as, for example, our State Medical Society, can we hope to accomplish anything. We must recognize that there is a dignity in fees as well as in service and demeanor, and let it be understood that the physician who habitually cuts fees is an enemy to his profession. Low fees means small incomes. Small incomes mean doctors who are always pinched. Doctors who are pinched for their daily bread are not studying, neither have they the equipment for doing good work. This results in cheap doctors and finally operates to the disadvantage of the community. The community who must pay the physician is even more interested in this question than the doctor himself. Let all our demands be reasonable and the community will be quick to recognize the justness of our demands if presented to them in the right way. This matter should be discussed openly and above board and as publicly as may be, because the public has a right to know and should be educated.

You have probably heard the story of the man whose engine failed to work. He sent for one expert after another to fix the engine, and they could not do it. They told him he must stop his factory and have the engine overhauled. This would result in great loss. Finally he called to his assistance an expert, who



readily saw what was the trouble, gave a certain part of the machinery a tap or two with a hammer, told the engineer to turn on the steam and the machinery moved without a hitch. He rendered a bill for \$100, itemized as follows:

For fixing the engine.....	\$ .50
For knowing how .....	99.50

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\$100.00

The fee was paid without a murmur. If it had been rendered differently, as, for example, \$100 for fixing the engine, the owner would have thought the fee exorbitant. Let us follow this man's example. Let the public understand that we are not charging for our time and services, but for knowing how.

Dr. Charles Spencer Williamson:—The keynote of the whole proposition in my mind, so far as it applies to the internist, simmers itself down to two things. First, the internist has been entirely oblivious of the old-time maxim that "the laborer is worthy of his hire." And, second, when he is brought in contact with the issues of that maxim, he has not got the moral courage to stick up for it, as has been pointed out by Drs. Pettit and Quine. I have relatively little sympathy for the cry of the internist in this way, that he does not get what he thinks is due to him, because in one way he is not really deserving of it. I do not say that he has not done good work. I do not mean to say that his diagnosis is not of as much value as the operation, for I hold that in many cases the diagnosis is worth ten times more than the operation of the surgeon. He has not earned it because he has not the spunk to sit up and put it on his bill. I do not believe he would have such a tremendous amount of trouble in getting it if he charged it. Of course there are always some who will never pay for anything unless forced to. I recall a case of this sort in which I charged a fairly good sized fee, but which I only got in part. Something like a year ago a patient came to me who had been sent by a friend, the friend stating that the man was well to do. He came to Chicago to consult a world-famous physician because a diagnosis was made of some sort of cyst which he was going to have removed from the upper abdomen. To make a long story short, fifteen minutes' examination disclosed venous engorgement of the liver, and it was found the whole trouble lay in a cardiac lesion. I made a diagnosis and sent him to the hospital to rest and await developments. I felt that the supposed cyst would disappear as soon as compensation was restored. In the course of a short time he returned home, greatly improved. Before leaving, he called me up over the phone and said he would be much obliged if I would send him my bill, and I sent him a bill for \$5,000. I went to Cincinnati for a few days, and on my return found a note on my desk which read something like this: "I received your bill, and unless there is a clerical error, I consider it nothing more nor less than an extortion, and I decline to pay it." An amusing feature was that my friend, who referred him to me, called me up over the phone and said the situation was embarrassing. My friend then said that the man would not consult the surgeon to whom he had been originally recommended because he thought he would charge him several hundred dollars, and he would not pay that much. The whole situation simmered itself down to this: I wrote a note explaining to the patient that the fee was a legitimate and justifiable one; that if it were a case of gall-bladder tumor, which it was not, he would have been perfectly willing to have paid a large fee for its removal, and would have done it probably without a whimper. The result was that finally the patient sent a check for \$1,500. Such treatment is the exception, not the rule. I am sure.

That expresses my attitude on this question. Even though I failed here to receive an adequate fee, we may be sure that the more we stand for a fair fee the more we will get it. If we do not stand for it, we won't get it. Have the backbone to stand up and say, I have done the work; I have delivered the goods, and you will, in general, be properly paid. The internist, when he makes the diagnosis, is entitled to be well paid for it, and when he is, the whole contemptible question of fee-splitting will disappear in short order.

*CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.*

A regular meeting was held Dec. 8, 1908, with the president, Dr. A. H. Andrews, in the chair. Dr. Herman Stolte, of Milwaukee, read a paper entitled "Demonstration of a Foreign Body in the Esophagus Removed by Esophagoscopy."

## DISCUSSION.

Dr. J. Rolinger:—The laryngologist is not the only one who fails to make an esophageal examination by means of the esophagoscope. The wife of a colleague complained of sore throat. She was examined by several neurologists who seemed to think that her trouble in swallowing and her cough were hysterical in nature. They sent her South, where she remained for a little while, coming home finally at the insistence of her nurse. She had lost considerably in weight, and was unable to swallow anything. An esophageal bougie was passed and it was found that there was complete occlusion of the esophagus. The tumor had perforated the larynx and had invaded the glottis. There was no longer any question about the diagnosis. If the diagnosis had been made three months earlier a radical operation might have been performed, with some benefit to the patient.

Dr. F. Gurney Stubbs:—Owing to the extremely high mortality which follows the external operation for foreign bodies in the esophagus there is no doubt but that Dr. Stolte's operation was a life-saving procedure. But it is not only in cases of foreign bodies in the esophagus that the esophagoscope is serviceable but in strictures and for diagnosis as well. Without referring farther to strictures I would relate two cases to demonstrate its value in diagnosis.

Some time in April of this year I was asked to see Miss M., aged 53. Previous to the preceding three months she had always been well and strong. At that time she began to notice some difficulty in swallowing food. This gradually increased till only fluids could be taken. Due to lack of sufficient nourishment she was losing weight, but had no pain nor could any enlargement or hardness be found on a careful external examination. The laryngoscope showed nothing in pharynx, larynx or trachea. But under a general anesthetic I passed the esophagoscope and found just below the mouth of the esophagus and about on a level with the cricoid, an annular constriction, reddened, and surmounted along its edge with a well marked papillomatous growth. The diagnosis was absolutely positive. The surgeons in charge of the case decided it was best not to operate. In two months a gastrostomy was done and she lived till October. It was only just before her death that the adjacent lymphatics became involved, hence it is clear that the esophagoscope was the only means that would have given a positive diagnosis so early in the case.

The second case was in a man about fifty in whom a diagnosis of carcinoma of the stomach had been tentatively made. The patient was emaciated, losing weight rapidly, and had been regurgitating food for six to eight weeks. There was no tumor to be palpated nor did the patient suffer any pain. I was asked to pass the esophagoscope for diagnostic purposes.

Under cocaine I passed one tube, but it proved too short to reach the cardia, and so far as it went showed nothing wrong. Under general anesthesia a longer tube was passed and showed the walls normal into the cardia. There was no constriction or obstruction, which had been there previously and did not allow a bougie to pass into the stomach. Hence in this case the negative findings were of as much value as positive would have been and enabled us to decide on cardi-spasm. The subsequent treatment of the case bore this out.

Dr. Herman Stolte (closing):—When I introduced the instrument I saw a long wound in the esophagus, discolored and gangrenous, probably caused by pushing down the foreign body. The material covering the bone had a decidedly gangrenous odor.

When introducing the esophagoscope, the patient should be placed in the lateral position, although the sitting position will answer, if the patient is seated on a low stool, so that the head can be thrown back. Occasionally it may be

necessary to extract a tooth in order to facilitate the introduction of the instrument, and at times its introduction may be impossible, as, for instance, in cases of lordosis.

DISCUSSION OF DR. BOOT'S PAPER BY DR. GEO. B. SHAMBAUGH.

Until quite recently our views in regard to pus infection of the labyrinth have been that such an infection is a diffuse one, which destroys the entire function of the labyrinth. With the improved methods for testing the various parts of the labyrinth we have been able to determine that pus infection may be a circumscribed one and not involving the entire labyrinth. The point has been mentioned in the paper just read, and has been previously suggested by others, that a suppurative involvement in the vestibular part of the labyrinth finds difficulty in passing through the canalis reuniens, and thus it frequently happens that the cochlea escapes infection. It may be true that the pus infection in the vestibule becomes walled off, so that the cochlea escapes, but I hardly believe this is due to the difficulty of the infection passing through the narrow canalis reuniens of Henson, which connects the sacculus with the ductus cochlearis. A pus infection which extends from the tympanum into the vestibule infects first of all the perilymphatic spaces. The communication between the perilymphatic chamber of the vestibule and the cochlea by means of the *apertura vestibularis cochleæ* is a very free one, and there is no necessity at all of imagining that the infection must first get into the membranes and then extend through the canalis reuniens to the ductus cochlearis. When the function of the cochlea is destroyed by pus infection that breaks first into the vestibule, this destruction comes about, I believe, by the infection passing from the vestibule through the *apertura vestibularis cochleæ* into the *scala vestibuli*, and then into the membranous labyrinth through the delicate membrane of Reissner. If our clinical observations are correct that pus infection of the vestibule is frequently limited to this part of the labyrinth, this could be readily accounted for by a plastic condition walling off the *apertura vestibularis cochleæ*. As to the advisability of urging patients to have a radical operation done on an ear which the patient must depend upon for hearing, I do not believe there can be much ground for difference of opinion. Under these circumstances the patient should be urged not to have a radical mastoid unless there are pretty definite indications pointing toward the development of a serious complication. In such a case the occurrence of a cholesteatoma hardly justifies a radical mastoid. This is a point we must never lose sight of, that to operate upon an ear that the patient depends upon for hearing we take the risk of impairing the function to a more or less degree.

Dr. Norval H. Pierce:—The main practical point in the paper is that it brings out the fact that ordinary suppuration in the labyrinth tends to become encapsulated. It is important for us to remember that point, especially as operations on the labyrinth are very likely to become more frequent on account of the increased discussion on this subject, especially in American literature. This is true particularly of the suppurative inflammations, but hardly of those changes due to cholesteatoma, because it tends to invade progressively the various cavities of the labyrinth. This walling off of the inflammation by a protective wall is the only thing we can produce by operation, and the operation is very likely to break down this wall that has been provided by nature. The mortality following operations on the labyrinth is about 45 per cent., and it is quite likely that this rate will be raised the more we operate on the labyrinth. Before we attempt an operation for suppurative labyrinthine disease we should consider that nature will probably do more than we can do by operative procedures.

Dr. A. H. Andrews presented some preliminary notes on bone conduction.

DISCUSSION.

Dr. J. Holinger:—I think that the greater part of these experiments find their explanation in the theory of the vibration of the tuning-fork. (Here Dr. Holinger gave a blackboard demonstration in explanation of his remarks.)

The vibration of the prongs, as has been shown by Edleman, affect the relative position of the handle. As the prongs separate the handle approaches, while as

the prongs come together the handle recedes. Hence any interference with the excursions of the handle also interferes with the vibration of the prongs.

Dr. F. Gurney Stubbs:—In one of the experiments noted by Dr. Andrews he found the patient perceived the tone again on replacing the fork to the mastoid. This is what Hammerschlag calls a fatigue symptom. The fork is placed on the mastoid while in vibration, removed for two or three seconds as soon as the patient has indicated that the tone has ceased, again replaced, and it is again perceived. This may be repeated two or more times. This fatigue symptom both he and Gradinigo declare to be a sign of hysteria. I can not agree with this. The fact is often noted by otologists in not only non-hysterical patients but in those whose hearing is normal. While it is evidently a fatigue of the auditory nerve, I think it is most often seen in those patients who can not easily concentrate their attention, or in those whose acuteness for tone perception is not marked. I do not regard it as a symptom of much value.

Dr. G. W. Boot:—Two points in this connection are worthy of note. One is in reference to testing bone conduction by resting the fork on the vertex without using pressure. It takes very little pressure to cause conduction to be considerably prolonged. Second, the C 2 or C 3 forks are almost valueless for determining the perception of pitch because of their overtones.

Dr. Stanton A. Friedberg reported a "Case of Nasal Calculus."

#### DISCUSSION.

Dr. W. L. Ballenger:—Several years ago Dr. Wilder referred a patient to me from whose nose emanated a very foul odor. I removed a calculus whose nucleus proved to be a piece of iron which was the breech-pin of a musket. While firing a gun thirty years before, the weapon exploded, destroying the left eye.

Dr. J. C. Beck:—Recently there appeared in a German journal an article on the diagnosis of rhinoliths by means of skiagraphy, before and after their removal. The lime stones apparently originate in a local necrosis and appeared to be multilocular. I have had two or three cases of large rhinoliths which, when examined chemically, proved to be of the magnesium type.

Dr. Friedberg (closing):—From the history of trauma, there was a possibility that the mass in the nose might have been a sequestrum, but if that had been true the patient would not have been able to move the mass as he did. For fifteen years he could grasp the anterior end of the stone, moving it backwards and forwards, but never succeeding in withdrawing it. The skiagraph showed the outline of the stone very well.

Dr. G. E. Shambaugh demonstrated an anatomical preparation showing a congenital absence of the lateral sinus. Of the anatomical variations that occur in the venous channels in the region of the temporal bone, the congenital absence of the lateral sinus is one of the most interesting. This is by no means a common occurrence, and, although occasionally a preparation of this sort is discovered, there appears to be no way of determining beforehand the existence of such an anomaly. The presence of this condition on one side necessitates, of course, a large part of the drainage from the head through the sinus on the opposite side. An operation upon the lateral sinus, ligation of the jugular in cases where there is a congenital absence on the opposite side, would be a very serious accident.

#### DISCUSSION.

Dr. Herman Stolte, Milwaukee:—I saw a specimen once in which the lateral sinus was situated so high up that it almost reached the crista superior of the petrous bone. The man always had tremendous roaring in his ears, which eventually led him to commit suicide.

Dr. W. L. Ballenger:—I have a specimen showing the same conditions as that mentioned by Dr. Stolte, but I do not know whether the individual had any roaring in his ears.

Dr. A. H. Andrews:—I would like to ask Dr. Shambaugh whether he made an examination of the distribution of the veins at the torcular, and if so, how they were distributed?



Dr. Norval H. Pierce:—The accident has occurred that the jugular was ligated on one side, causing the death of the patient, and at the postmortem no jugular was found on the other side.

Dr. George E. Sambaugh (closing):—I had only the two temporal bones, without the connecting parts; therefore I can not answer Dr. Andrews' question.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

Clinical meeting of Dec. 14, 1908. Dr. T. A. Woodruff, president, in the chair.

##### A CASE OF MELANOSARCOMA.

Dr. William H. Wilder presented a patient, male, 57 years old, who has a growth on the outer right eye at the outer limbus. When first seen the growth measured about ten millimeters in diameter, was semiglobular in shape, with a papillary surface, somewhat pigmented, firm in consistency. The patient first noticed the growth last June and believes that it made its appearance suddenly. It has not increased very much in size since then. He came to the infirmary three weeks ago and was placed under the care of Dr. Beard, who thinks that the growth has increased in size during these three weeks. Dr. Wilder excised about one-third of the mass under cocaine anesthesia. The growth was not very vascular, and was rather firm in consistency. It was rather firmly fixed, and was encroaching slightly on the cornea. There is no indication of any on the interior of the eye, even after dilating the pupil *ad maximum*. Microscopic sections showed an unmistakable carcinomatous growth. At one point the basal membrane of the conjunctiva was broken through the epithelial growth extending beneath it. The large epithelial cells which make up the growth are grouped together in characteristic carcinomatous patches, with alveoli surrounded by a distinct stroma. Many cells show pigmentation, particularly around the nuclei. It was impossible to determine at the time whether this pigment was melanin or the product of the healing process. It is probably the latter, the case evidently being one of melanotic carcinoma, which is extremely rare in this situation. The fundus is normal; refraction has not been measured carefully, but the man has good vision without any correction.

Dr. Dean asked Dr. Wilder how extensive an operation he would advise in his case.

Dr. Wilder stated that he believed that there was no involvement of the intraocular structure, and the question in his mind is whether he would be justified in excising the mass and carefully scraping the vitreous and then waiting for further developments, although sooner or later an enucleation of the eye would have to be done.

Dr. L. N. Grosvenor asked what the fundus findings were in the case, especially with reference to the ciliary body. LaGrane reported a case of carcinoma of the ciliary body with a large extrabulbar mass, an involvement of the ciliary body and the choroid.

Dr. Wilder stated that after thorough dilatation of the pupil he was unable to find any fundus lesions as far forward as the vena vorticosæ; nor was the vitreous clouded. Vision was 20/40; there was no detachment of the retina.

Dr. Henry Gradle asked whether it would not be feasible to excise deeply and close the wound by transplanting the conjunctiva and then use the x-ray for awhile, explaining to the patient that the slightest relapse would mean enucleation of the eye.

Dr. Frank Allport concurred in Dr. Gradle's suggestion, removing as much tissue as possible, even with transplanting the conjunctiva, and then the x-ray treatment. Of course, he said, the objection might be raised that the x-ray might injure the eye, but inasmuch as the eye is certain to be injured ultimately, nothing could be lost by such a procedure.

Dr. H. B. Young, some fifteen years ago, had a similar case in which he excised the growth very thoroughly. It recurred, and he excised the mass a second time. It recurred again, and he suggested removal of the eyeball, and the patient then passed from under his observation.

Dr. O. Tydings, about six years ago, had a case similar to Dr. Wilder's, in which the cornea was involved. The patient gave a history of trauma fifty years before. An ulcer developed, but got well. Dr. Tydings advised an operation, but as he could not guarantee the integrity of the globe, the patient demurred and disappeared for six months. Then Dr. Tydings removed the growth in its entirety, and the only thing left was a black spot about the size of a pin-point, which is still present. Vision is perfect. The microscopic diagnosis of the tumor was melanosarcoma. Four months ago the patient was still well.

Dr. Frank Allport had a case twenty years ago which was diagnosed as sarcoma. He sent the man for consultation to a surgeon in another city, and when he returned the tumor had been removed. The mass was white in color; it did not recur up to ten or twelve years ago, the last time he saw the patient.

Dr. Wilder said that the scrapings had been examined for tubercle bacilli, but not for blastomyces. No tubercle bacilli had been found.

Dr. Wilder said that cases that simulated lupus or epithelioma have proved to be cases of blastomycosis, and suggested that the tissues be examined for blastomyces.

#### SKIN GRAFT FOR PTERYGIUM.

Dr. Clark Hawley presented a boy, 11 years old, who had quite an extensive pterygium, the result of a firecracker burn. The growth extended nearly to the center of the cornea. The scar tissue was excised and a piece of skin taken from behind the ear of the patient's sister was transplanted into the eye with most excellent results, until about three weeks ago, when it was noticed that the skin which was involved in the symblepharon began to come forward close up to the cornea, necessitating a second operation. The fault lay in not putting something in front of the symblepharon over which it could not grow. At the second operation all of the cicatricial tissue was removed, leaving only the conjunctiva. With scissors the conjunctiva was undermined up to the central line of the eyeball, and then brought together with sutures, so that more than half of the cornea is covered with conjunctiva. A piece of skin was transplanted between the cornea and the remaining tissue, and the result was excellent, except at one little point where the tissue came up under the flap. The cornea now is absolutely clear, and the patient has perfect motion of the eyeball.

#### PROGRESSIVE PRIMARY ATROPHY OF IRIS.

Dr. Alfred N. Murray reported this case for Dr. Wood. In March, 1904, the patient, male, about 42 years of age, first noticed a change in the iris of the right eye, the pupil seeming to be irregular in outline, just as though an iridectomy had been done. This change in the iris continued until now the iris has disappeared almost entirely. The tension of the eyeball is increased, but vision has not been interfered with to any very great extent. Nothing could be elicited in the patient's history to account for the condition. A search of the literature failed to reveal a similar case.

#### PROBABLE CASE OF LUPUS.

Dr. O. Tydings presented a woman, who, when she first came to him, on June 25, 1908, gave a history of an occlusion of the left nostril and a "pimple" on the right side of the lachrymal sac, which looked like a dacryocystitis, but he could not decide whether it was this or a case of perforating ethmoiditis. Apparently there was no connection between the pimple and the ethmoid sinus. The septum was perforated, probably the result of operative procedure, although previous operation was denied. She was placed on specific treatment for a time, and there seemed to be some improvement at first, but it did not continue. Below the lachrymal sac was a collection of pus, which he evacuated. By September the lesion had extended beyond the median line of the nose. The leucodescent light was used, thinking that the case might be one of tuberculosis, and tuberculin injections were begun. The first injection was given September 22, and every week since then one injection has been given. The patient has continued to improve

under this treatment, and the lesion is healing rapidly. A distinct reaction followed the first injection, and a slight reaction followed the second. The ulceration resembled lupus, but several dermatologists who saw the patient thought that it might be a case of syphilis; others thought it was tuberculosis.

#### RETINITIS PROLIFERANS.

Dr. A. N. Murray presented a man, 37 years old, who three years ago had a sudden blurring of vision while pitching hay. He said that a sort of veil came over the right eye, and after a few months he was not able to distinguish features. About a year ago the same thing occurred in the left eye, and for the past few weeks he has been unable to distinguish anything. There has been no ocular pain, but for the last six months the patient has complained of temporal headaches. There is no evidence of inflammation, tension is normal, pupils react normally to light and accommodation, vision in both eyes is fingers at three feet. General health is good. Patient denies lues, but had gonorrhea twenty years ago. Urine, negative; Pirquet test, negative; physical examination, negative. About seven years ago he had suppuration of the glands of the neck, which lasted about a year. The diagnosis was made of retinitis proliferans.

The left fundus is invisible on account of the hazy vitreous. In the right eye, beginning at the disc, is a moderately large band of apparently white fibrous tissue, like a piece of twisted cotton, extending to the upper nasal quadrant. Fine tortuous vessels are seen all over it. There is another streak running down to the lower nasal quadrant. The vitreous is hazy.

Dr. Wilder referred to a case which he had exhibited before the society last spring, which was a typical one of retinitis proliferans, where the strands of connective tissue were well marked, more so than in Dr. Murray's case. The patient, a boy, twelve years old, had the trouble with his eyes come on spontaneously, without any history of injury. Vision was very much impaired. There was a very distinct response to the injection of tuberculin, so that the patient was put on tuberculin treatment, but there has been no change in his condition; if anything, the vascularity of the strands in the retina is less than it was, so that he probably will not furnish one of these interesting complications, such as intraocular hemorrhage, necessitating ligation of the common carotid artery, as was done in a case by Dr. Derby several years ago.

Dr. Tydings had a case a few years ago in a boy, 17 years old, with both eyes involved, one more than the other and far more extensively than in Dr. Murray's case. The bad eye cleared up somewhat later but with the good eye he came to see fingers at a few inches only. The patient gave a history that the condition would clear up for a time, and then the hemorrhages recurred. His mother and sister had died of tuberculosis; the father was alive and well. The boy presented no evidence of tuberculosis, nor did an examination of the lungs and sputum disclose anything. There was one thing peculiar in this case, and that was a very chronic and obstinate constipation. The patient has been getting progressively worse.

#### MALIGNANT HEMORRHAGIC RETINITIS.

Dr. L. Wallace Dean reported the case of a young man 18 years old, who came to him about a year ago with both vitreous cavities almost filled with blood. The fundus was obscured by a dark red mass. Since then the fundus has been visible several times, and extending into the vitreous were blood vessels. The hemorrhages recurred. It was evidently a case of malignant hemorrhagic retinitis.

#### TRAUMATIC CATARACT.

Dr. W. E. Gamble reported the case of a woman, 34 years of age, on whom he operated recently for a cataract, probably traumatic. There was no nucleus in the cataract, simply the cortex. Within two weeks he saw a young man, 18 years old, who gave a history of traumatic cataract, the eye having been injured by a baseball seven years ago. The cataract was overripe in appearance. In the center

of the lens there seemed to be an opaque spot, quite marked. He thought that there might be calcareous degeneration of the lens. On cutting through the capsule a milky fluid flowed out, and on pressure he found a well-developed nucleus.

#### TRAUMA OF THE EYEBROW.

Dr. H. B. Young reported a case of trauma of the eyebrow by a piece of iron, but the man did not think that the eyeball had been injured. He had traumatic mydriasis, hemorrhages into the anterior chamber and vitreous. Vision remains poor, although the hemorrhages have been pretty well absorbed. The wound in the eyebrow is entirely closed. The man had nausea and headache at the time of the injury, and there was considerable chemosis thirty-six hours afterwards.

#### A NEW ADVANCEMENT OPERATION.

Dr. George F. Suker described a new advancement operation, consisting in the shortening of the muscle with one suture, preserving the original insertion of the tendon, closing the conjunctival wound, and bringing the muscle forward to the point of insertion. The operation leaves very little deformity.

Dr. Gradle has performed an operation similar in purpose, but not similar in execution. He split the tendon longitudinally and partly the belly of the muscle, putting in the suture as Dr. Suker does, but instead of going around the edge of the muscle he went through it, drawing the ends of the suture together. He now uses not one suture, but two, tying them over aluminum plates. There is not so much tension, but the result is disappointing, because of the adhesions which are bound to form. The operation will do very well for minor corrections, he thought, but not for major ones.

Dr. Suker said that he had tried the method for four or five years and has found it serviceable even in very large degrees of convergence.

MORTIMER FRANK, Secretary.

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#### HAMILTON COUNTY.

The Hamilton County Medical Society met at the office of Drs. M. C. and H. W. Dale, in McLeansburg, at 1 p. m., Tuesday, April 13. Those present were: Drs. I. M. Asbury, president; J. J. Hassett, W. W. Hall, M. C. Dale, H. E. Hale, P. M. Natim, S. W. Williams and C. M. Lyon, secretary. Officers for the ensuing year were elected as follows: President, I. M. Asbury; first vice-president, H. W. Dale; second vice-president, W. W. Hall; secretary and treasurer, C. M. Lyon; delegate to Illinois State Medical Society, M. C. Dale. Mrs. L. Y. Avery, district superintendent of the Illinois Children's Home and Society, was present and addressed the society, giving a short sketch of what had been done for the dependent children of Hamilton county, and on motion of Dr. W. Hall, the society donated ten dollars to the home. A very interesting paper on "Erysipelas" was read by Dr. W. W. Hall, and it was discussed by all the members of the society. A motion to hold a special meeting at the office of Drs. Dale at 7:30 p. m. on the first Tuesday in May was carried. On motion the society adjourned to meet at the park of Dr. H. E. Hale, north of Belle City, on the second Tuesday in July.

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#### LOGAN COUNTY.

The Logan County Medical Society met in annual session Friday evening, April 16, in the City Hall at Lincoln. One new member, Dr. James Welch, of Broadwell, was received. Arrangements were made for the entertainment of the Brainerd District Medical Society at Lincoln on May 29, and committees in the county society were appointed. The officers who serve next year are: President, Dr. T. M. Perry, Broadwell; first vice president, C. C. Montgomery; second vice-president, C. C. Reed; secretary, H. S. Oyler; treasurer, A. M. Sargent.



## LAKE COUNTY.

The Lake County Medical Society held its regular meeting at "The Gables," Waukegan, Feb. 25, with the president, Dr. J. C. Foley, in the chair. The following members were present: Drs. H. B. Roberts, Highland Park; L. H. Tombaugh, W. C. Bouton, F. M. Baker, Henry Holm, M. J. Kalowsky, E. F. Gavin, A. O. Wright, F. C. Knight, T. C. Brown, W. H. Watterson of Waukegan; Elva A. Wright of Lake Forest. The invited guests were: Drs. C. L. Mix of Chicago, D. H. Richardson of Barrington, and State's Attorney Ralph J. Dady of Waukegan.

Dr. C. L. Mix held a clinic on "Confusional Insanity" and later addressed the meeting on the subject, "Diagnosis of Different Forms of Insanity." The subject was freely discussed by those present. Dr. Mix was given a unanimous vote of thanks, after which the meeting adjourned to the luncheon room, where, while partaking of luncheon, the business of the meeting proceeded.

Dr. W. C. Bouton was elected as delegate and Dr. Elva A. Wright as alternate to the State Medical Meeting at Quincy. Dr. F. C. Knight, Dr. L. H. Tombaugh and Dr. H. B. Roberts were chosen by the chair as the board of censors. Drs. Henry Holm, T. C. Brown and A. O. Wright were elected as members. Meeting then adjourned.

At a called meeting of the Lake County Medical Society held at the office of Dr. L. H. Tombaugh March 9 at Waukegan, the following resolution was passed by unanimous vote:

"Resolved, That the Osteopathy Bill, now before the State Legislature, is not intended for the best interest of the public in general, and that we hereby wish to express our disapproval of this bill by unanimous vote, and that said action be immediately carried to our representatives and senators."

Meeting then adjourned.

## MORGAN COUNTY.

The regular meeting of the Morgan County Medical Society was held March 11 at the library in Jacksonville, Ill. Dr. Otto T. Freer of Chicago was present by invitation and gave an interesting presentation of the Operative Treatment of Deflection of the Nasal Septum. Drs. W. C. Day and H. W. Chapman of White Hall were visitors.

The Morgan County Medical Society met April 18 at the Public Library Building, Jacksonville. Members present were: Drs. Cole, Day, Gailey, Hairgrove, Hardesty, McLaughlin, Reid, Stacy, Thompson and Woltman. The treatment of pneumonia was considered by Drs. T. O. Hardesty and H. C. Woltman.

Dr. Hardesty:—The treatment of this disease has long been winked at, as it has been considered a self-limited affair. All cases of bronchitis should be looked at as possible pneumonias. Hot foot baths and counter irritation relieve the embarrassed circulation at the beginning due to lung congestion. Nourishment should be given regularly, mostly carbohydrates, mother's milk in infants when possible. Locally, irritation is of value, turpentine, camphor and oil are used. Bowels should be kept open with calomel and oil. Treat the disease with a view to avoiding complications.

Dr. Woltman:—With all forms of treatment up to date mortality is now no lower than 20 per cent. The views of prominent clinicians that pneumonia is self-limited have contributed greatly to the therapeutic nihilism regarding it. So far antitoxie, serum and vaccine treatment have been of little avail. In the means at our command most satisfactory results have come from careful nursing, cool sponging for temperature control and fresh air.

Discussion on papers was opened by Dr. David Reid. Dr. W. K. McLaughlin reported an epidemic of influenza at the School for the Deaf.

GEORGE STACY, M.D., Secretary.

**ROCK ISLAND COUNTY.**

The regular February meeting of the Rock Island County Medical Society was held at the Manufacturers' Hotel in Moline on February 9. After dinner the scientific program was taken up as follows: "Acute Rheumatic Fever," Dr. R. C. J. Meyer, Moline. Discussion of paper by Drs. G. G. Craig, Sr., of Rock Island, Ludwig and Long. As the report of the committee on contract work in general was not complete, the committee was requested to continue its investigations and to report at the next meeting. Dr. Alfred Stock was elected to membership. After allowing the usual bills, the society adjourned. Members present were: Drs. Williams, Hollowbush, Arp, Dondonville, Tremblay, Long, Foster, Sargent, Craig, Sr., Craig, Jr., Lamping, Comegys, Dart, Mueller, Ludwig, Sonders, Leipold, Asay, R. C. J. Meyer, Peterson, Stocker and Snively.

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**ST. CLAIR COUNTY.**

The annual meeting of the St. Clair County Medical Society was held at Priesters Park, Belleville, Ill., April 1, with about fifty members present. Dr. Twitchell, president, in the chair and Dr. Hilgard acting secretary. After acting favorably on the following for membership, Drs. H. H. Cables, East St. Louis; Ily. Ressel, East St. Louis; G. C. Otrich and W. A. Dew, Belleville, and Geo. H. Doane, of O'Fallon, the society heard and accepted reports of outgoing officers, after which the following new officers for 1909 were elected: President, Dr. W. E. Wiatt, East St. Louis; vice-president, Dr. Geo. E. Hilgard, Belleville; secretary, Dr. E. H. Lane, French Village; treasurer, Dr. A. E. Hlasing, Belleville; delegate to state meeting, Dr. Gunn, with Dr. Zimmerman, alternate. After adjournment lunch was served which was thoroughly enjoyed by all present.

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**VERMILION CONUTY.**

The regular meeting of the Vermilion County Medical Society was held March 8, 1909, in the City Hall, Danville, Ill. Meeting was called to order by the President, Dr. S. C. Glidden. Minutes of the last meeting were read and adopted. Dr. Robert H. Babcock of Chicago, gave a paper on "Reports of Cases, Illustrating the Effect on the Heart of Some Intra-abdominal Diseases." His talk was a very interesting one and enjoyed by all members present. A general discussion followed Dr. Babcock's talk. A vote of thanks was tendered to Dr. Babcock for his excellent talk, after which the meeting adjourned.

The Vermilion County Medical Society met in the City Hall April 12, 1909. Minutes of the last meeting were read and approved. Dr. George W. Poole was elected to membership in the society. Dr. Egan's communications concerning the proposed osteopathic legislation were read and generally discussed. No action was taken in this matter at this meeting, as a petition had been signed previous to this meeting expressing the views of those present concerning this matter. However, on motion of Dr. Cooley, the president and secretary were instructed to write Dr. Egan expressing the views of the society relative to the "Osteopathic Bills."

Dr. A. E. Prince, of Springfield, was the first on the program and gave a talk on "Hysteria, as Related to the Eye, Ear, Nose and Throat." His talk was very interesting and dealt with reports of some of his own cases in relation to the subject. A vote of thanks was voted to Dr. Prince for his excellent talk and expression given to him for another visit to this society. The second paper of the evening was that read by Dr. Benjamin Gleeson on "A Plea to the Family Physician for a More Universal Recognition of Eye Strain as the Cause of Headache and Other Reflex Disturbances." The third paper of the evening was that read by Dr. E. E. Clark on "Squint—an Appeal to the Family Consultant." Both Dr. Gleeson's and Dr. Clark's papers were well prepared and much appreciated by all present.

Those present were Drs. McIntosh, Miller, Leo Fairhall, Sol Jones, Poland, Babcock, Tenny, Crist, Dale, Cruikshank, F. N. Cloyd, Cooley, M. Y. Downs, Clinch, Glidden, Steely, Wilkinson, Gleason, Clements, Clark, R. N. Cloyd, Leitzbach, Regan, Cochran, Cooper and Guy.

GEORGE STEELY, Secretary.

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### WINNEBAGO COUNTY.

The Winnebago County Medical Society held their meeting Tuesday, April 13, at Rockford, which was addressed by Drs. R. B. Preble and Ellis K. Kerr, of Chicago, on the subjects, "Myocarditis" and "Prognosis of Cardiac Lesions," respectively. There was a splendid attendance from this and surrounding county societies, followed by refreshments and a smoker. The physicians of Winnebago county have taken active measures with their legislators in opposing the Osteopathic Bills before the legislature. Sixty members have recently paid their per capita tax to the state society.

FRANK W. HANFORD, Secretary.

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## Book Notices.

**CONSTIPATION AND INTESTINAL OBSTRUCTION.** By Samuel G. Gant, M.D., LL.D., Professor of Diseases of the Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Octavo of 559 Pages, with 250 Original Illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

Dr. S. G. Gant, formerly of Kansas City, a graduate of the Missouri Medical College, removed to New York City a few years ago and has rapidly come to the front in the practice of his specialty in diseases of the rectum and anus. This latest product of his pen deals with a most important series of diseases in a masterful way, and will be welcomed by those who have had the privilege of following Dr. Gant in his other works. It is a complete exposition of the causes and treatment of constipation and intestinal obstruction, developing all the latest ideas upon these subjects and may easily be said to be a masterpiece of medical literature.

**APPENDICITIS AND OTHER DISEASES OF THE VERMIFORM APPENDIX.** By Howard A. Kelly, M.D. With 215 Original Illustrations, some in colors, and Three Lithographic Plates. Philadelphia: J. B. Lippincott Company.

This is practically the second edition upon a work on this subject by Dr. Kelly, and embraces a review of the history of the subject; the anatomy, physiology, pathology, differential diagnosis, relation of appendicitis to typhoid fever and its development in childhood and old age and numerous forms of the disease, its relation to obstetrics, gynecology and finally the medicolegal aspects of appendicitis. The same wealth of illustrations is found here, as in all the treatises of Dr. Kelly, and leaves nothing to be desired for a complete understanding of the subject.

## NEWS OF THE STATE

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### PERSONAL.

Dr. George M. Pears, Joliet, sailed for Vienna May 1.

Dr. Jacob Frank, Chicago, has returned from a trip to Cuba.

Dr. and Mrs. E. Fletcher Ingals, Chicago, have returned from Florida.

Dr. Carl A. Wickland has removed from Waukegan, Ill., to Hannaford, N. D.

Dr. Laban A. Burr, Bloomington, is reported to be seriously ill with heart disease.

Dr. Alexander H. Ferguson has been elected president of the Semi Club, Chicago.

Dr. and Mrs. William Cuthbertson, Chicago, have returned from a visit to New Orleans.

Dr. Samuel M. Wylie, Paxton, who has been ill for several weeks, is recuperating in Citronelle, Ala.

Dr. Jacob Frank, 100 State Street, Chicago, has been appointed attending surgeon to the Columbus Hospital.

Dr. Robert F. Hayes, Freeport, one of the oldest members of the local fraternity, fell, March 21, fracturing his left femur.

Dr. Joseph C. Beck, Chicago, has been elected professor of otology, rhinology and laryngology in the Chicago Eye, Ear and Throat College.

Drs. William A. Evans and Theodore B. Sachs are to be the first directors of the proposed Municipal Tuberculosis Sanitarium, Chicago.

Dr. Julius Grinker, Chicago, has been appointed a member of the consulting staff of the Cook County Hospital, vice Dr. Ferdinand Hotz, deceased.

Dr. Lucy Waite, of Chicago, announces that she has resigned as head surgeon of the Mary Thompson Hospital of that city and has retired from practice.

Dr. Hartwell C. Howard, Champaign, one of the oldest and most esteemed practitioners of central Illinois, was struck by a speeding automobile, April 1, and seriously injured.

Dr. D. M. Camerer, of Chrisman, Edgar County, Illinois, has just returned home from Florida, where he spent the winter. The Doctor is 85 years old, has been in active practice for sixty-three years, having graduated at Rush Medical College in 1847. He is probably the oldest practitioner in the state, Dr. J. D. Camerer, of Kimmunity, being his son.

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### NEWS.

The Board of Education has decided to name the new high school to be erected on the North Side "The Nicholas Senn High School."

One hundred and ten thousand dollars have been donated by William Deering and others for the completion of Wesley Hospital, Chicago.



Of the 117 medical students who took the county civil service examination March 9 to 11, 48 attained the required standing, one of whom was a woman.

The Presbyterian Hospital and the Presbyterian Training School for Nurses, Chicago, are to receive \$5,000 and \$10,000, respectively, by the will of the late Nelson B. Holden.

Peter Rundberg is said to have been fined \$100, April 8, by Municipal Judge Fry, for conducting a hydropathic institution known as the "Ravenswood Sanitarium," without a license by the state.

A building permit has been secured for the Cook County Tuberculosis Hospital, to adjoin the County Hospital, Wood and Harrison streets, Chicago, and work on the building, which will cost \$1,000,000, will soon be commenced.

The Chicago-Winfield Tuberculosis Sanitarium now has 20 patients, 15 of whom are being treated free. The directors have decided to open a subscription list for annual memberships, in order that the full quota of patients may be accommodated as soon as possible.

At the meeting of the Nicholas Senn Club, March 29, it was proposed to erect a memorial to Dr. Senn in one of the Chicago parks. Plans were also discussed for the establishing of a memorial lectureship or for fitting up a room in the new Crerar Library in memory of Dr. Senn.

March 26 Dr. Jessie Buckley Ogden, of Waukegan, was arrested after the coroner's jury first returned a verdict that Mrs. Joseph Connors, of that town, had died of malpractice at her hands. The bail was fixed at \$10,000, which was furnished, and the prisoner released for a hearing in the near future.

One Paul Trotter, said to be a hospital interne, was recently sentenced by Judge Clifford, of Chicago, to a term in the penitentiary after having pleaded guilty to the charge of robbery. Trotter, in company with Harry J. Carney and Harry E. Barger, formerly switchmen, had held up and robbed Michael Bates of \$102.

It is announced that a new medical organization is to be formed in McDonough County to promote the general knowledge of surgery and pathology. Drs. Joseph B. Bacon, S. S. Allen and A. P. Standard, Macomb, are the incorporators of the organization, which is to be known as the McDonough Surgical and Pathological Society.

The Chicago Tuberculosis Institute reports that the net proceeds from sales of Red Cross Christmas stamps were \$7,378.78. This sum is to be used by the society for such special purposes as preparation of a traveling tuberculosis exhibit, the preparation of small exhibits for school, a relief fund for dispensary patients and a special fund for dispensary patients.

At the meeting of the Senn Club, held March 26, it was decided to perpetuate the memory of Nicholas Senn and to bring before the public, lay and professional, the valuable services rendered by Dr. Senn. The means to be employed for this purpose will be decided on later. Dr. Alex. Hugh Ferguson was unanimously elected president of the club, and Dr. Arthur MacNeal was re-elected secretary.

McAlister Hospital of Waukegan, the only hospital in Lake County open for general use of the public, and the Lake County Tuberculosis Institute, now having established a tent colony four miles out of Waukegan, and the Lake Bluff Orphanage, which is generally recognized as a public benefactor in the community of Waukegan, are to unite in having a tag day for the benefit of these three institutions on May 1.

Complaints have been made to the Deering Street Police Station, Chicago, regarding Joseph Kulkowski, an alleged quack doctor, that he has made a practice of treating patients by blood letting, and his arrest has been ordered. These charges were brought to light recently at an inquest over the body of John Stetz, 46 years old, 3759 Hermitage Avenue, who died on Monday as a result, it is said, of blood poison following the alleged opening of a vein in his arm by Kulkowski.

Ninety-Day Crusade Against Tuberculosis.—The states of Florida and Georgia have recently engaged in crusades against the white plague, in which were enlisted the Federation of Women's Clubs, the National Association for the Study and Prevention of Tuberculosis, medical societies, commercial bodies, schools, churches, lodges, the public press and public-spirited citizens. Such a crusade could be and should be undertaken in Illinois, and no doubt would lead to a notable advance in the suppression of this disease.

In pronouncing judgment against a Mrs. Sigmund Wysocki, charged with fleecing a young woman by telling fortunes, Judge Uhlir made the following statement: "Fortune tellers and neeromaneers are a disgrace to our modern civilization, and there should be some law passed to prevent them from preying on the ignorant and uneducated. I am sorry that you can not be held on a criminal charge," said Judge Uhlir to Mrs. Wysocki. "You have deliberately fleeced this girl out of her money, because she was poor and ignorant. It is too bad that the statutes do not deal with your case."

Dr. O. J. Baldwin, formerly city physician of Springfield, Ill., was recently given a verdict of \$597.50 in a suit against Sangamon County for services furnished during an epidemic of smallpox while he was serving his term of office. The bill made out by the doctor amounted to nearly \$3,000, and, while the doctor was supposed to treat all paupers on the salary established, he claimed that when he agreed to act for the salary regularly paid for the position he had not contemplated the excessive amount of work involved, and that he should be paid extra for the extra work. The jury allowed about 20 per cent. of the amount claimed.

A certain Dr. John G. Message, of 148 State Street, Chicago, is reported, in the daily press of Chicago, to have been engaged in the management of fake prize fights in connection with the employment of Anna McDermott, who was employed as clerk by Dr. Message prior to her connection with the kidnaping of Willie Whitla. Message is reported in the *Chicago Tribune* to have said: "The story that she met in my office men who had pulled off fake prize fights is a falsehood. I had a manager to attend to that sort of business and it was never carried on in

my physician's office. There were headquarters for that elsewhere. And she didn't learn to associate with men beneath here there, either."

In accordance with Chapter VII, Section 3, of the By-laws of the Chicago Medical Society, as revised March 30, 1909, the following candidates have been nominated to be voted upon at the election of the Society, June, 1909: President, William E. Morgan, Hugo E. Betz (withdrawn); secretary, George F. Suker, W. S. Harpole; councilors-at-large, Frank S. Johnson, M. Z. Albro, William Senn, C. S. Bacon, George W. Webster, J. E. Waggoner, E. A. Fischkin, Theodore Ticken, C. P. Caldwell and George E. Baxter; alternate councilors-at-large, Bernard Fantus, C. G. Buford, Charles E. Humiston, Willis Nance, Brown Pusey, John E. Rhodes, K. A. Zurawski, J. P. Houston, J. V. Fowler and Clarence Earle.

Dr. Paschal Bowman, formerly of Springfield, Virginia, Clinton, Galesburg and other communities in Illinois, but recently of Peoria, was recently arrested and confined in the Mason County Jail at Havana charged with murder in connection with the death of Mrs. Walter Dobson. The charges were made that Dr. Bowman during an operation upon the woman failed to stop the flow of blood which caused her death. After incarceration in the jail for several days Bowman secured the bond for \$5,000 and was liberated. A nurse who has associated with Dr. Bowman for several years is said to have written a letter to the family of the deceased woman which caused the charge to be made and which charge seemed to be confirmed by the postmortem examination made under the direction of the sheriff and the coroner of Mason County. At the coroner's hearing the nurse, Purdy, is said to have proven a very unwilling witness in refusing to answer questions.

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#### MEDICAL SOCIETY NOTES.

The Jefferson County Medical Society was addressed by Dr. J. W. Pettit at Mt. Vernon April 9. The public was also invited to the meeting.

At the annual spring election of the Knox County Medical Society held in Galesburg on April 15, Dr. J. E. Cowan was elected president and Dr. D. L. Evans secretary-treasurer for the ensuing year.

The Morgan County Medical Society held its regular meeting at Jacksonville April 8. Papers on the treatment of pneumonia of children and adults were read by Drs. T. O. Hardesty and H. C. Woltman, and the discussion was opened by Dr. D. W. Reid.

The Clay County Medical Society met at Flora April 10. Dr. J. W. Pettit, president of the State Medical Society, addressed the meeting. The general public were also invited to be present, and the lecture was interesting to both the profession and the public.

The Jersey County Medical Society met at Jerseyville March 30. Dr. A. K. Van Horne, of Jerseyville, presided. Dr. J. W. Pettit, of Ottawa, Ill., president of the State Society, gave an address on "Organization." Dr. Carl E. Black, of Jacksonville, delivered an address.

We received the following official communication from the secretary of the Coles County Medical Society, which speaks for itself: "At the April 6th meeting, at Mattoon, Ill., the Coles County Medical Society suspended for one year from date Dr. B. D. Parrish, of Mattoon, by a unanimous vote for consulting with an *irregular*."

At the annual meeting of the Morgan County Antituberculosis Society, held in Jacksonville March 29, an illustrated lecture on tuberculosis was delivered by Dr. James W. Pettit, Ottawa, president of the Illinois State Medical Society. Alfred T. Capps was re-elected president of the society, and Dr. Tully O. Hardesty was re-elected secretary.

The annual meeting of the Warren County Medical Association was held April 8 at the courthouse in Monmouth. Dr. J. R. Ebersole and Dr. Clark of Roseville were among those who addressed the meeting. All the old officers were re-elected as follows: Dr. W. E. Weiss, president; Dr. E. L. Mitchell, vice-president, and Dr. C. Sherrick, secretary-treasurer.

At the meeting of the Boone County Medical Society at Belvidere April 8, the following officers were elected: President, A. J. Markley; vice-president, A. W. Swift; secretary and treasurer, Charles R. Scott; censor, R. C. Mitchell; delegate to state meeting, R. W. McInnes. Dr. Stealy, of Freeport, read a paper of very much interest. The attendance of members was large.

The Mason County Medical Society held a meeting in Havana April 5. The annual election of officers was held and resulted as follows: Dr. Rozier, of Mason City, president; Dr. A. F. Burnham, Mason City, vice-president, and Dr. A. C. Servons, of Havana, secretary-treasurer and delegate to the state meeting which will be held in Quincy. The next meeting of this society will be held in Mason City in July.

The Perry County Medical Society has elected the following officers for the coming year: President, Dr. C. S. Cleland, of Swanwick; vice-presidents, Drs. E. L. Burch of Duquoin, J. S. Marlow of Tamaroa, J. W. Smith of Culter and Oscar Mead of Pinckneyville; secretary-treasurer, Dr. C. H. Roe, of Pinckneyville. Dr. Burch, of Duquoin, was chosen delegate to the State Medical Society at Quincy this May.

The Greene County Medical Society holds its regular quarterly meeting in the Illini Clubrooms at Carrollton March 19. The program included papers on "Purulent Pleurisy and Empyema," by Dr. H. W. Chapman, of White Hall; "Cancer of the Breast," by Dr. A. E. Meisenbach, of St. Louis; "Gastritis," by Dr. F. H. Russell, of Eldred. Eighteen members were present. The next meeting will be held at Kane June 11.

The Rock Island County Medical Society held a meeting at Rock Island April 13. The following officers were elected for the ensuing year: President, Dr. W. H. Ludewig, Rock Island; vice-presidents, Dr. H. S. Bennet, Moline, and Dr. W. L. Eddy, of Milan; secretary, Dr. W. D. Snively, Rock Island; treasurer, Dr. A. E. Williams, Rock Island. Dr. T. J. Lamping, of Moline, the retiring president of the society, was appointed county delegate to the state meeting.



Secretaries' Association of the Chicago Medical Society.—The secretaries of the branches and of the affiliated societies of the Chicago Medical Society have organized a Secretaries' Association. The object of this Association is to promote an active and effective cooperation with the officers of the Chicago Medical Society, to promote closer and more intimate interchange of views and ideas in reference to general society organization. It is now planned to hold two regular meetings during the year—one in September, just before the opening up of the year's work, and in January, at a time when the society is at full blast. At a meeting held on Thursday evening, April 1, a constitution was adopted and the following officers were elected: Dr. W. O. Nance, of the Chicago Ophthalmological Society, president; Dr. M. Z. Albro, vice-president, and Dr. C. Hubart Lovewell, of the Englewood Branch, secretary. Ten of the fifteen branches and six of the affiliated societies were represented at this meeting.

Realizing that the branches and the affiliated societies are the foundation of our medical organization in Cook County, and that the work of these subsocieties depends in a large measure on the capability and activities of the local secretary, this organization has been inaugurated with the single object of stimulating and aiding the Secretary in the performance of his most important and vital work.

The secretaries of all the branches and affiliated societies were invited to the complimentary dinner of the County Secretaries' Association given by the Council of the Illinois State Medical Society at Quincy May 19.

A committee on state meeting was appointed, consisting of Dr. M. Z. Albro, chairman, F. Gurney Stubbs and L. N. Grosvenor. A committee of three was also appointed to confer with the treasurer of the Chicago Medical Society in reference to the apportionment of branch funds.

It is the plan of the officers to call a special meeting during the first week or so in May. All secretaries who are anxious to equip themselves in every possible way to better serve their respective societies are urged to attend these meetings. Suggestions in reference to subjects for discussion will always be appreciated by the officers.

W. O. NANCE, President.

C. HUBART LOVEWELL, Secretary.

Meeting of the Physicians' Club, Lincoln, Ill.—An invitation extended the Physicians' Club of the city of Lincoln by Dr. H. G. Hardt to meet at the Asylum for Feeble-minded Children on Thursday, March 11, 1909, was accepted, and a special meeting of the club held. The following excellent papers were read: Cretinism, Dr. A. G. Hamilton; Feeble-minded Epileptics, Dr. C. B. F. Rochow; Paralytic Form of Idiocy, Dr. C. B. Caldwell. Following these a supper was served in the dining room. The meeting was attended by most of the physicians of the city. The only regret expressed was that such a law should be in force as to prevent the use of the clinical material so valuable and near at hand.

A farewell banquet was given to Dr. F. L. Rose by the Englewood Branch of the Chicago Medical Society at the Kaiserhof on Thursday evening, April 22, 1909. Dr. Rose leaves Chicago to take up practice in Lusk, Wyoming, and many of his friends in the Englewood and Stockyards District felt that he ought not to be allowed to go without some demonstration of the love and esteem with which he was regarded. Accordingly the banquet was arranged as a surprise, and the following resolutions engrossed on sheepskin were presented to him: "Rose, here's to you and your family. May you live long and prosper."

Resolutions regularly adopted by the Englewood Branch of the Chicago Medical Society on the twenty-second day of April, 1909.

*To Our Honored Colleague, Dr. F. L. Rose:*

With individual feelings of keenest personal regret we learn you have determined to leave us.

In the twenty odd years of our social and professional friendship you have ever exemplified the virtues—moral uprightness, wisdom and professional courtesy. These actuating your efforts for high ideals in your profession, made doubly effective by your unusual literary gifts, have placed your colleagues and patients alike under peculiar obligations to you.

As president of the Englewood Branch of the Chicago Medical Society you demonstrated practically the enormous value of the lovable qualities you so largely possess, creating an influence of fraternal sincerity among us.

In your new field of labor and of love, rest assured, Dear Doctor, your professional brethren, without an exception, wish for you the full measure of success, knowing well that where human suffering exists there can be found no one better qualified in hand and heart for relief than yourself.

To those among whom your lot will be cast we would say in the sincerest language of the heart, we have lost a brother physician above reproach, whom to know is to love; you have gained a prince of men and a peer among the best of physicians.

CARL LANGER, President.

C. HUBART LOVEWELL, Secretary.

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## PUBLIC HEALTH.

An epidemic of smallpox is reported at Norris, Ill.

Several cases of smallpox have been reported at Marietta, Ill.

Smallpox is reported at the Electric mines, near Danville, Ill.

Several cases of smallpox have developed in Waterford Township.

The public schools of Elgin have been closed on account of an epidemic of measles.

Scarlet fever is reported at Rockford and also in the vicinity of Saunemin.

On account of an epidemic of scarlet fever in Sullivan all schools have been ordered closed.

Scarlet fever is reported at Champaign, Ill. The public schools have been closed and several homes are under quarantine.

An epidemic of smallpox is raging at Farmington, and has been reported in the vicinity of Breeds and some in the village.

The little town of Trivoli, near Peoria, has reported several bad cases of smallpox, and the disease is also reported at Beardstown and Schmoldtville.

Several cases of smallpox and chickenpox have been discovered in Roanoke, Ill., and all public gatherings have been prohibited. The high school will continue, but the pupils must be vaccinated.

Two cases of smallpox have been reported in Galesburg. Both cases are under quarantine and every precaution has been taken to prevent the spread of the diseases, and as yet no other cases have been reported.

During the past winter the doctors of Waukegan have been finding isolated cases of smallpox in that city. The total number, however, being but 4 or 5, yet they have been so scattered that it keeps constant danger of spread at hand.

On March 17, 2,400 patients, attendants, members of the administrative staff, nurses and physicians at the General Hospital for the Insane, South Bartonville, were vaccinated by order of the superintendent. Two cases of smallpox had developed at the institution.

According to reports to the State Board of Health, there is a widespread epidemic of smallpox areas, including northeast Fulton and southwest Peoria counties. The disease first made its appearance in Canton, Pekin and Glasford and spread from there to adjoining localities.

The Department of Health of Chicago, in studying the high death rate from diphtheria, finds three major causes: First, that the doctor does not see the case early enough; second, that he does not give enough antitoxin, and, third, that in prolonged cases he does not repeat the antitoxin early enough.

The bill of Senator Womack to provide for the sterilization of habitual criminals and imbeciles, which is a duplicate of the Indiana sterilization bill, has been reported by the Judiciary Committee and ordered to a second reading. The Southern District Medical Society, Chicago, adopted resolutions, March 29, favoring sterilization.

The State Federation of Labor has decided to cooperate actively in the fight to stamp out tuberculosis. Literature dealing with occupational diseases, and particularly with tuberculosis, giving full information concerning symptoms of the disease and the work being done for its eradication, is to be distributed by the federation among the 500,000 trade union members in the state.

Dr. George A. Zellars, superintendent of the Illinois General Hospital for the Insane, South Bartonville, appeared before the House Committee on Appropriations, March 31, and asked for an appropriation sufficient to build seven new cottages for the institution. There are now nearly 2,200 and more are constantly arriving. Dr. Zeller also asked for a new dining hall for patients.

A conference on public health was held at the University of Illinois, Urbana, April 19-24, under the auspices of the University of Illinois and the Illinois State Board of Health. Prof. W. T. Sedgwick, of the Massachusetts Institute of Technology, delivered a series of lectures on "Science in the Service of Public Health"; Dr. T. J. Bryan, chemist of the Illinois State Food Commission, spoke April 20 on "The Relation

of Pure Food to Public Health," and a special session of the health officers was held April 23 for a general discussion of problems of health in the state. This session was opened by Dr. James A. Egan, secretary of the State Board of Health.

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#### NEW INCORPORATIONS.

Amboy Hospital, Amboy; capital, \$7,500; to maintain hospital; incorporators, H. W. Hillison, E. A. Sullivan and J. P. Johnson.

Prof. J. H. Austin Company, Chicago; capital, \$2,500; manufacturing and dealing in proprietary medicines and remedies, etc.; incorporators, William H. Yott, Fred G. Roempler and Weston C. Hyde.

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#### MARRIAGES.

STEPHEN S. BARAT, M.D., to Miss Louis Clingman, both of Chicago, April 17.

G. C. BLACK, M.D., Table Grove, Ill., to Miss Blanche Harris, of St. Louis, March 16.

JOHN ADAMS KAPPELMAN, M.D., Evanston, to Miss Jennie Hanson, of Oak Park, March 18.

ADOLPH B. SMITH, M.D., Woodstock, Ill., to Miss Olive Blanche Alexander, of Chicago, March 10.

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#### DEATHS.

P. S. TRIBBEY, M.D. Cincinnati College of Medicine and Surgery, 1871; died at his home in Secor, Ill., March 9, aged 87.

E. W. STARKEY, M.D.; 47 years old; a prominent physician of Waynesville; died in Hot Springs, Ark., where he had gone for his health.

GEORGE W. BRONSON, M.D. Rush Medical College, Chicago, 1881; died at his home in Streator, Ill., March 31, from cerebral hemorrhage, aged 55.

CHARLES B. JARED, M.D. Hahnemann Medical College, Chicago, 1905; a lecturer in his alma mater; died at his home in Chicago, April 5, aged 52.

AMOS YORK, M.D. Eclectic Medical Institute, Cincinnati, 1878; a veteran of the Civil War; died at his home in Strasburg, Ill., from lung disease, March 12.

JOHN C. CORBUS, M.D. was found dead in his bed in Mendota, Ill., recently. He was formerly superintendent of the Eastern Illinois Insane Hospital at Kankakee.

ROY S. BLACKBURN, M.D. Keokuk (Iowa) Medical College, 1896; a member of the Illinois State Medical Society; died at his home in Low Point, March 28, aged 36.



ROBERT E. BARNES, M.D. University of Michigan, Ann Arbor, 1857; surgeon in the army during the Civil War; died at his home in Galesburg, Ill., April 6, aged 78.

A. J. G. HALL, M.D. of Kinnandy; died April 1. He graduated at Royal College of Edinburgh, Scotland, in 1845. Had not practiced for several years. Aged 90 years.

BERNARD J. DOWNEY, M.D. University of Michigan, Ann Arbor, 1895; for a time city physician of Ottawa, Ill.; died at the home of his parents in that city, April 7, aged 36.

CHARLES C. HUMMELL, M.D. College of Physicians and Surgeons, Chicago, 1899; of Ransom, Ill.; died in the Oakes Home, Denver, March 15, from pulmonary tuberculosis, aged 39.

GEORGE A. STARKEY, M.D. Louisville (Ky.) Medical College, 1884; of Waynesville, Ill.; a member of the Illinois State Society; died in Eureka Springs, Ark., March 19, aged 51.

GEORGE M. MCKENNEY, M.D. Rush Medical College, Chicago, 1889; of Oregon, Ill.; a member of the American Medical Association; died in Amarilla, Texas, March 23, from ptomain poisoning, aged 44.

WILLARD SOUTHARD WHITNEY, M.D. Homeopathic Hospital College, Cleveland, 1868; a pioneer practitioner of Big Rapids, Mich.; died at the home of his daughter in Pontiac, April 2, from senile debility, aged 90.

JAMES O. CARTER, M.D. Starling Medical College, Columbus, Ohio, 1860; formerly of Lincoln, Neb.; a surgeon during the Civil War; died in a hospital in Chicago, March 28, from myocarditis and arteriosclerosis, aged 76.

GUSTAV HESSERT, M.D. University of Würzburg, Germany, 1858; for many years a member of the staff of the Cook County and German hospitals; died at his home in Chicago, April 4, from cerebral hemorrhage, aged 73.

CHARLES DEAN HEWS, M.D. University of Michigan, Ann Arbor, 1870; surgeon to the Calumet Street Railway Company; a veteran of the Civil War; died at his home in Kensington, Chicago, March 24, from the effects of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent, aged 62.

JAMES E. C. SULLIVAN, M.D. Louisville (Ky.) Medical College, 1872; of Cairo, Ill.; for many years a member of the American Medical Association and a member of the Illinois State Board of Health; died in the Alexian Brothers Hospital, St. Louis, March 12, after a prolonged illness, aged 64.

FERDINAND CARL HOTZ, M.D.; one of the oldest and best known ophthalmologists of Chicago; died, March 21, from pneumonia, aged 65. He was born in Wertheim, Germany, and after study in Jena graduated in medicine from the University of Heidelberg in 1865. He came to the United States and located at Chicago in 1869. He has been ophthalmic surgeon to the Illinois Charitable Eye and Ear Infirmary since 1876; professor of ophthalmology in the Chicago Polyclinic since 1888, and professor of ophthalmology and otology in Rush Medical College since

1898, and oculist to the Cook County and Presbyterian hospitals. He was a member of the American Medical Association; one of the founders and once president of the Chicago Ophthalmological Society. His contributions to ophthalmologic literature have been frequent and valuable.

JOHN PITT MATTHEWS, M.D., Carlinville, Ill., died at his residence in Carlinville Thursday, Jan. 7, 1909, at 11:40 p. m. For a number of years Dr. Matthews had been afflicted with heart disease and was well aware of the approaching end of his life. He was a highly successful physician. His judgment and advice were sought by brother physicians in all parts of Macoupin County. His thorough knowledge of his profession, acquired after long years of patient, earnest work and investigation, made his diagnosis sound and his treatment correct. He was always a student, a careful reader and, without regard to the magnitude of his practice, sought at all times to keep himself fully advised as to the methods and discoveries of the brightest lights of his profession.

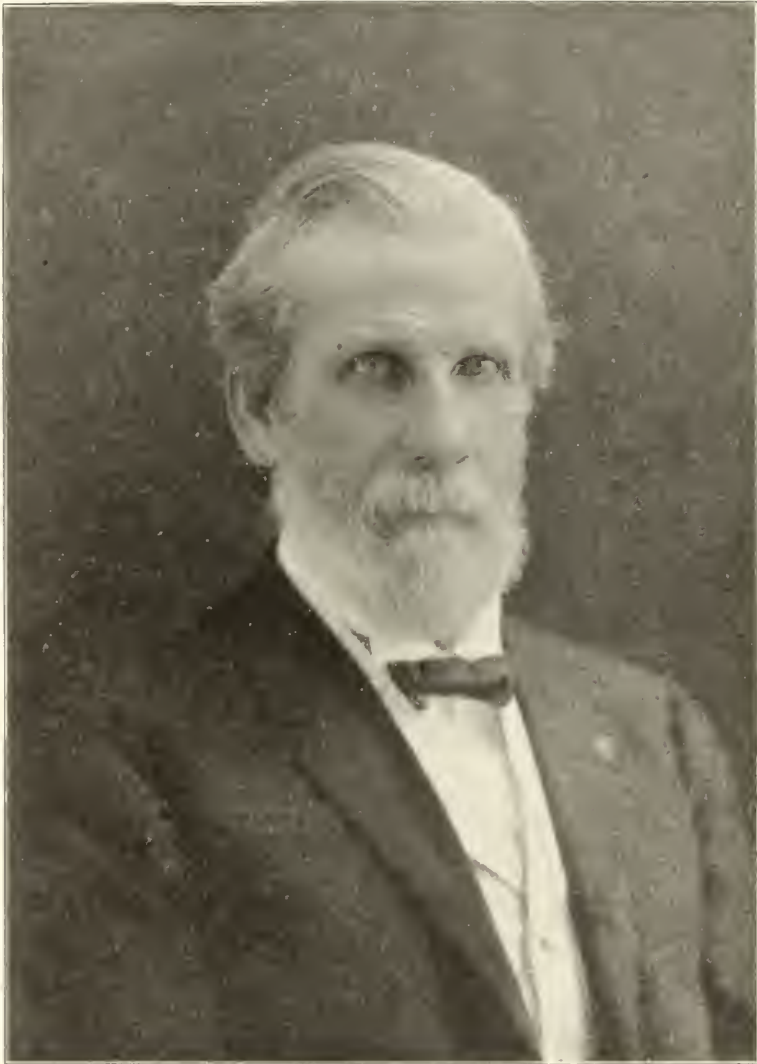
He had confidence in his knowledge of his profession, but did not seek to force others to adopt it. He was tolerant and broad minded. He attained a high degree of success in his chosen profession and was an honor to the city and county in which he so long resided. Dr. Matthews was a public-spirited citizen. He stood for all those things which were best in life, and believed in clean and wholesome administration of all public affairs. In his home life he was a splendid husband, devoted and earnest to those near and dear to him, and sought in every way to make them comfortable and happy.

Dr. Matthews was born at "Hampton Court" farm in Herefordshire, England, Sept. 2, 1835, and was a son of John and Caroline Myra (Cooper) Matthews. He, with his father, migrated to America in 1844, and soon after located in Mercer County, Pennsylvania, later removing to Sharon, where he was living at the time of his father's death in 1864.

The deceased was one of a family of eight children. The first eighteen years of his life were spent upon the farm, during which time during the winter months he attended the district school. At the age of 18 he attended Sharon Academy, and the following year entered Duff's Mercantile College at Pittsburg and pursued a mathematical course. He then taught school for one year, and during the two succeeding years was in attendance at Allegheny College at Meadville, Pa. He then removed to Greene County, Illinois, and taught school at Saulsbury one term. He was principal at the Greenfield Academy one and a half years. Having decided to enter the medical profession, he began preparations by reading under the instructions of Dr. Peter Fenity, of Kane, Ill., and afterwards took a course of study in the medical department of the University of Iowa at Keokuk.

Dr. Matthews then began the practice of medicine in Scottville, Macoupin County, and devoted himself zealously to his work until 1862. He then entered the United States service as assistant surgeon of the One Hundred and Twenty-second Illinois Infantry, but after he had been with the regiment a year was obliged to resign on account of ill health. He returned to Carlinville in the fall of 1863, and subsequently

attended a course of lectures and was graduated from Long Island Hospital, New York. He returned to Carlinville, where he has since continued his practice with uninterrupted success. He was a member of the county, state, national and international medical associations, and has had his share in raising the standard of the profession. He was elected



first vice-president of the Illinois State Medical Society in 1890 and president in 1891, and in 1893 spent three months abroad attending the International Medical College at Berlin, Germany, and the British Medical Association at Birmingham, England, and at the same time visited many of the leading hospitals in Europe. While abroad he visited

the place of his birth and met, in Germany and elsewhere, the brightest lights of the medical profession.

In 1865 Dr. Matthews was married to Miss Elizabeth A. Palmer, daughter of Gen. John M. and Malinda Palmer. To this union four children were born, namely, John Palmer, a successful physician and surgeon and who has been associated in the practice with his father; Lucy Myra, wife of Haydon S. Gaines, of New York; Fred W., manager of the Indestructible Phonograph Record Company of New York, and Elizabeth Mayo, who died at the age of 10 months.

In 1858 Dr. Matthews became a member of the Masonic Order at Kane, Ill., and subsequently transferred his membership to the lodge in Carlinville. He took an active interest in public affairs, though he did not seek preferment for himself. He served in the capacity of alderman in Carlinville and on the board of education. He was for a number of years one of the efficient, active trustees of Blackburn College, and for five years was treasurer at that institution.

The funeral was held from the family residence on Saturday afternoon, January 9, at 2 p. m., the service being in charge of Rev. H. M. Chittenden, archdeacon of Alton, a lifelong friend of the deceased. He was assisted by Dr. W. H. Bradley, acting president of Blackburn. Both of these gentlemen delivered impressive discourses in which they paid high tribute to the life and services of the deceased. Each one had known him for a number of years and each spoke most feelingly of him as a man and as a citizen. The pallbearers were representatives of the Macoupin County Medical Society and were as follows: Drs. J. R. Ash of Brighton, W. L. Patterson of Benld, C. J. C. Fischer, J. P. Denby, J. S. Collins and Henry Davis of Carlinville.

The interment was in the Carlinville Cemetery and was under the immediate charge of the G. A. R. Post of Carlinville, of which the deceased was an honored member. Commander W. H. Horine conducted the ritualistic service, and when the body of their deceased comrade was lowered into the grave the service ended with the sounding of the taps, a truly soldier funeral.

Appropriate resolutions were passed by the Dan Messick Post, No. 339, G. A. R., Department of Illinois, and by the Macoupin County Medical Society.

BE SURE TO ATTEND THE  
**STATE SOCIETY MEETING**  
AT QUINCY, MAY 18, 19, 20.



# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

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No. 6

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## ORIGINAL ARTICLES

### THE RELATION OF THE MEDICAL PROFESSION TO THE SECULAR PRESS.\*

JAMES W. PETTIT, M.D.  
OTTAWA, ILL.

The purpose of a presidential address, as I view it, is either to review the achievements of the medical profession or make some suggestions for its advancement. As the time at my disposal will not permit of both, I will essay the more hazardous alternative of calling attention to a rule in our code of ethics which in its application, I believe, is unreasonable and harmful.

I have had occasion to present this topic for discussion to this Society once before and my reason for presenting it again is because of the confusion which exists in the minds of medical men as to its proper application. This confusion narrows our influence as a profession; hence I believe we will make no substantial progress in preventive medicine until we have a clearer, more rational, and comprehensive view as to the application of this ethical principle. I refer to that provision of our code with regard to advertising.

In scientific advancement the medical profession very justly enjoys the distinction of being one of the most progressive of the sciences or professions. The rapid strides made during the last two or three decades have made it necessary to more than double the college curriculum. Now that the time limit of the college course seems to be reached, the problem presented is how this vast accumulation of knowledge can be so arranged as to enable the average mind to compass it. In this rapid march of achievement our minds have centered upon the purely scientific aspects of our profession to the exclusion of our public duties and material interests, which may be less fascinating but are none the less important. The general awakening of the profession to the necessity

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\* Presidential address delivered at the 59th Annual Meeting of the Illinois State Medical Society.

for organization, which is now recognized by the greatest activity ever known in our history, is simply preliminary to a readjustment of our relations to the new conditions and problems presented by our modern civilization.

In our ethical relations the tendency in the past has been to extreme conservatism—a conservatism that led to a monkish exclusion almost in our relations to those who differed from us in methods of practice, and especially has this been true in our attitude toward the secular press. Our attitude toward the irregulars in the past has contributed to the formation of medical sects who are very largely indebted to the hostility of the regular profession for much of the success which they have attained. This society was the first to break down the barrier of sectarianism in medicine—a barrier erected with the purest of motives but maintained for many years by an unreasonable prejudice based upon a blind veneration for a provision of our code of ethics bred more in ignorance than in knowledge.

The action of this Society several years ago in unanimously refusing to longer be governed by a tenet of the code, which, to say the least, had outlived its usefulness, was unanimously approved by the better class of medical men everywhere. For years we maintained a policy of exclusiveness toward irregulars, which we finally abandoned, to our own advantage and that of the public whom we serve. An ethical principle which we stoutly maintained for a long time was finally changed, and now not even the most strait-laced of those who contended for its maintenance will admit that our liberality in that instance was a mistake. This demonstrates that our ethical rule in this important particular needed readjusting and leads to the thought that there may be more work for us to do along the same line.

There is no precept of our code which meets with such universal approval, and the infringement of which is so quickly resented by the reputable element of our profession, as the one which prohibits advertising of that fraudulent and offensive kind which is so justly obnoxious to the ethical sense of every honorable and self-respecting physician. Our position on this question needs no defense, or even explanation, involving, as it does, the fundamental principle that fraud and deception are always and unequivocally wrong, and never more so than when practiced upon the defenceless sick and ignorant. This is so true that it is impossible to conceive of any change in our environment which will ever make any departure from this ethical standard necessary.

The only phase of the subject, then, which presents itself for discussion involves the method of application of this principle, and not the principle itself. In other words, whether we have not included more than is consistent with a proper application of the principle, thereby refusing to avail ourselves of agencies which can and should legitimately be used for the advancement of medical science, and more particularly in its application to the common welfare.

No agency is more potent for good or evil than the secular press. By secular press I mean more particularly the newspaper, which each

day reaches fully 90 per cent. of the reading public. By far the larger part of the public, especially busy people, get about all their general information from the newspaper. The newspaper is the only printed source of information for fully one-half of the reading public. It is the purveyor as well as the conveyor of information, and the average editor is actuated by as praiseworthy motives in his field of activity as we are in ours. From being simply a record of events the newspaper now covers almost every field of human endeavor, even to the extent of maintaining departments for the teaching of technical knowledge, which, though crude and imperfect as yet, is an effort in the right direction.

The editor is usually a broad gauge man, who is deeply and conscientiously interested in the welfare of humanity. If his columns do not always seem to bear out this statement it is because he must give the people what they demand. The newspaper is not only the mold of public opinion, but a leader as well. At the same time, it must supply the facts, fancies and fallacies upon which public opinion is based. In doing this the editor is often accused of pandering to a vicious sentiment. The successful newspaper man is keenly alive as to what is news and what is not. He knows that the public does not buy his paper for his opinion, but for the happenings of the day. This he must supply because the public demands it, and oftentimes in a manner contrary to his ethical sense. But by giving the public what it demands he, at the same time, by rare tact and finesse, guides his readers to a higher plane of thought and action. He is to the public what the wise wife is to her husband, "while she bends him, she obeys him." While there is still room for improvement, the average newspaper of today is conducted on a higher plane than at any time in the history of journalism. Space formerly devoted by the better class of newspapers to the sickening details of a murder, a hanging or a social scandal is now devoted to the more profitable dissemination of useful knowledge, and no item of news is seized upon with greater avidity or finds space more readily than a scientific fact, and particularly one pertaining to the promotion of health or the cure of disease. Experience teaches that the lay public takes a keen interest in everything concerning medicine and its progress.

If the average newspaper medical item is frequently ludicrous, and almost always erroneous, is it the fault of the editor who does the best he can to get this information, or of the physician who, through the wrong application of a correct principle, in regarding all newspaper mention of himself or his profession as advertising, refuses to cooperate with the editor in giving the people what they want, and what they have a right to demand, through the only practical agency made available to them? While it should always be regarded as extremely unprofessional to advertise in the sense in which this term is ordinarily understood, are we not overscrupulous and unduly sensitive in regarding every mention of the doctor's name in the columns of the newspaper as advertising? Is it not a wrong application of a correct principle when we make it unethical for a physician to discuss medical topics in the secular press, or cast suspicion upon him because his name happens to appear

in a newspaper column? This unreasonable criticism and censorship has been carried to such an absurd extent that the truly honorable, ethical physician not only seeks to prevent the use of his name in the secular press, but feels that he is placed on the defensive if it even appears without his knowledge or consent.

To illustrate some of the extremes to which such criticism leads. Recently the Mayos, father and sons, were written up by one of our leading magazines. There was nothing in the article calculated to offend, although written by a layman. It was just such information about these wonderful surgeons as would be eagerly read by the public, yet I heard one of the most respectable members of our profession in this state deprecate the fact that the Mayos were advertising! Dr. Frank Billings, a member of this Society, who is doing such able and self-sacrificing work for our state charities, and Dr. W. A. Evans, another member, who is not only distinguishing himself but shedding lustre upon our profession by the great work he is doing as Health Commissioner of Chicago, I have heard accused by good men in our ranks of advertising because their names appear so frequently in the columns of the daily press. The most absurd criticism I have heard in this line was of my predecessor, Dr. Baum, who was accused of this heinous offense because his picture and that of a beautiful yacht he had recently purchased appeared in a Chicago paper. Such an attitude is as absurd as it is illogical and may be illustrated by the story of the old maid who complained to the authorities that some young men engaged in an athletic sport near her home were not sufficiently clothed. To accommodate her they were removed to a distance. Again she complained, and when reminded that the distance was too great for her to see she said she could see them very plainly with a telescope.

Such criticism, although recognized by men engaged in philanthropic work as unjust, has a decided tendency to handicap them in their work and the embarrassment which every man feels who is judged as lowering the ethical standards of his profession, no matter how unreasonable such criticism may be, has a decided tendency to make him shrink from the discharge of a public duty which he would otherwise regard as a pleasure and a privilege. Many are even so sensitive that, rather than submit to such unmerited criticism, refrain altogether. Thus the public loses valuable service and the individual is confined to a narrow field of endeavor by a slavish adherence to a senseless interpretation of what is otherwise a beneficent ethical rule. No matter how unselfish the motive or self-sacrificing the service it is classed as an unethical attempt to exploit oneself to the detriment of others.

To still further illustrate, an article appeared in one of the leading Chicago dailies giving a description of one of the principal hospitals in that city. There was nothing in the article of especial interest to the medical profession, but much to interest the public. Among the other items of information were the names of the medical and surgical staff, with a complimentary reference to their professional ability, which was not fulsome or undeserved. These gentlemen, knowing how squeamish



their medical brethren are on this point, felt called upon to disclaim that they had any connection with its publication through this same public press. In seeking to justify themselves with their profession for a fancied offense against an ethical rule, they violated the very provision of the code which they were seeking to uphold (if we accept the usual interpretation) by still further advertising themselves. Col. Ingersoll said that "any theological dogma carried to its logical sequence ends in an absurdity." May this not be true of a rule of ethics when too rigidly construed?

Some medical societies have gone so far as to pass resolutions demanding that newspapers shall not print their names. Such action is absurd, not to say ridiculous, and is an unwarranted attempt to dictate, which always results in a well-merited rebuke on the part of the press. The press very justly resents such interference just as we would were these gentlemen to interfere with our business. Newspaper men will always respect the wishes and rights of our profession if we are reasonable and just in our attitude toward them. They will not and should not tolerate prudery. In the discussion of this question we befog the issue by failing to discriminate as to what is really advertising, publicity, news, and simply bad taste. It is regarded as orthodox to make a wholesale condemnation of all publicity regardless of conditions and circumstances. The subject is of too much importance to both the profession and the public to be disposed of in this easy, off-hand manner.

But, does our code warrant such a construction? Are we not making it include more than its language permits, or than was originally intended? The code says "It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician." No honorable physician will demand a lower ethical standard than this, and even the newspaper fraternity, who represents the only interest that can possibly be affected by adhering to this standard, will recognize the equity of such a rule of conduct. I insist it is not the code that is wrong, but our interpretation of it. Advertising in its best sense is simply publicity. The element of exaggeration and wilful misrepresentation which has always characterized the medical advertisement, as we know it, is what very justly condemns it. But because this is true, shall we refrain from the legitimate use of the press and define what this shall be? Our failure to discriminate is what leads us into error. A broad definition of advertising would include anything and everything in an advertisement, whether paid or otherwise, which is intended to benefit the individual. If such an advertisement contained

the truth there could be no logical objection to it. It is the element of fraud, intentional or otherwise, which makes advertising by our profession so objectionable.

Any advertisement devoid of exaggeration, either expressed or implied, should be regarded as legitimate. However, it is not even this kind of advertising for whose recognition I plead, but the larger and more useful publicity which is mis-called advertising. Publicity may be defined as exploiting any medical fact which is of benefit to the public. Incidentally more or less advantage will accrue to the publicity given to meritorious work done by the physician. This, however, is not advertising, but the legitimate reward for good work. The physician who furthers his own interest by doing good professional work is entitled to the reward which such service brings. This may be by scientific research, active society work, promotion of the public health, anything and everything that promotes legitimate medicine and the public welfare, and, even though the motive may be fundamentally a selfish one, should be encouraged. News is news, whether it relates to the physician or not. There are many things connected with our professional work of which the public has a right to know. There are also many of which they have no right, and it would be a violation of professional confidence to make public. The code is sufficiently clear on this point.

The frequent mention of the doctor's name in the local press, keeping the public advised as to every move he makes, important and commonplace, is not advertising. This is simply bad taste and indicates that the doctor has a fool friend or a reporter, or, what is more probable, that he is himself responsible, and in so doing is simply exploiting himself as a fool or an ass. This practice, which fortunately is not common, is the most offensive of all the attempted methods of advertising. It should not be assumed, however, that the physician is always responsible for or privy to the mention of his name. This may be and probably is true of the silly but harmless fellow whose name is constantly paraded before the public, but is not of medical men as a rule. Any well-conducted newspaper will always respect the wishes of the medical man by keeping his name out of his paper when not necessary to make a news item complete. Just how and to what extent the medical profession may use or be used by the secular press legitimately can not be formulated by rule. Good judgment and good taste must govern in this matter as in everything else. The traditions of the profession with regard to advertising should be preserved, but let us make the distinction between principle and method and not make ourselves the subject of criticism and ridicule by contending for the perpetuity of methods which are obsolete.

I have observed that many medical men who advocate a narrow interpretation of the code are engaged in advertising by devious methods if we accept the doctrine that all publicity is advertising. The writing of useless books, the establishment of medical colleges for the primary purpose of securing professorships, reading papers of doubtful value before medical societies as an excuse for the wholesale distribution of

reprints, are some of the methods employed to evade the spirit of our code of ethics. The mad attempt to thus deceive and be deceived is responsible in a large measure for the establishment of so-called medical colleges (many of which are simply diploma mills), an evil which is not only a disgrace, but an absolute menace to our profession. One of the best means of mitigating these evils is to permit and encourage legitimate publicity along more rational and less harmful lines.

How does our attitude toward the secular press materially differ from that of the religious reformers of the dark ages who defaced and destroyed stately churches, beautiful pictures and statuary because they were used in a religious worship which was obnoxious to them? Of those religious denominations who formerly refused to allow the use of musical instruments in their churches because they were made use of for immoral purposes? The failure to discriminate between the use and abuse of things, good in themselves, often leads to very irrational acts.

The question that presents itself to us for solution is this: Shall we refuse to make a legitimate use of the secular press because others, as we believe, use it illegitimately? Shall we secure the good will and co-operation of the secular press by treating it as an ally instead of an enemy? There is nothing more useful and necessary to remove ignorance and misapprehension than authentic information. Why should not we, who are the repositories of medical information, avail ourselves of the principal channel through which the public can be reached? If the public are left to secure such information as they may, from quack and patent medicine advertisements or faddists, it is very inconsistent for us to complain if that information is misleading. Neither should we refuse to give it to them through the only agency by which it will reach them, namely, the secular press.

One of the stock arguments used against discussing medical topics in the secular press is the assertion that the public can not understand. This is unreasonable. Public opinion is the great arbiter to whom every question must finally be referred for a decision. It is the tribunal to which we are constantly appealing, individually and collectively. An intelligent conception of a medical problem does not depend upon any other sense than common sense, and it is presumptuous for us to give as a reason why medical topics should not be discussed in the newspaper that they are too abstruse for the average layman to understand. This is probably true of the purely technical or theoretical, but not of general or practical questions. Any medical proposition that is beyond the comprehension of the intelligent layman, when fairly presented, is likewise too deep for the average physician or is too speculative to have much value. Our attitude toward the public is too much like that of many parents who do not realize that their children, no matter how mature, ever arrive at years of discretion and understanding.

We deprecate the ignorance and duplicity of the public in being fleeced by quacks, being dosed with useless and injurious patent nostrums, and rallying to the support of irrational medical fads. We complain of the secular press for inserting patent medicine and quack ad-

vertisements, for giving publicity to medical fads, for which they receive pay, and then refuse to avail ourselves of this same agency for the dissemination of the truth, "without money and without price," because of an unreasonable prejudice. Because the newspaper inserts the quack or patent medicine advertisement we criticize and ostracize it. When the editor asks us for reliable medical information we refuse to give it, through what I believe to be a misinterpretation of an ethical rule. The editor does not employ the quack or dose himself with patent medicine, but usually employs the educated physician. He does not, as a rule, even give them editorial endorsement, hence is not responsible for the advertisement. He simply sells his space, which he has a perfect right to do.

Granting that the secular press is a legitimate field for the dissemination of medical knowledge, what may fairly be regarded as the range of its usefulness? At present this question can only be answered in the most general way. More definite knowledge must come with the successes and failures which will result from experience. The first step necessary is to relieve the truly ethical, educated physician from unfriendly criticism if he ventures to discuss through the medium of the press medical topics of general interest. Under present conditions the physicians who are most capable of enlightening the public, and whose opinions would have weight and influence, will not, as a rule, be heard until this embargo is raised. Relieved of this censorship, medical men will enlarge their field of usefulness by directing public opinion along proper lines, and not leave the laity to get their ideas of medical matters "catch-as-catch-can."

How many laymen are there who would be able to follow with intelligent interest a discussion of the problems which are presented by the bacteriology of tuberculosis, problems on the correct solution of which the lives of thousands of the present and of future generations will depend? How many are there who have any adequate idea of the part played by minute organisms, animal and vegetable, in the history of creation, or in the course of the daily lives of themselves and their contemporaries? How many are there who have any conception of the nature and extent of the changes which have revolutionized surgery within the memory of men still active in the world, and how many who understand the nature of the mental processes by which this revolution has been brought about, the exactness of research, the patience of experimentation, the devotion to truth, the ceaseless labor, which has never before been witnessed in the history of the world, so far as that history is known to us; and the medical profession will never occupy its right place in society or be regarded in any more adequate light than as dispensers of pills and powders until the nature of its work is better understood by the public than it is at present.

How shall the people know these things unless we teach them? How shall they discriminate between the true and the false, the physician and the quack, if they do not have the information which will enable them to make this distinction. We of the medical profession are in



possession of truths which can help our fellow men. Shall we hide our light under a bushel or shall we follow the scriptural injunction to preach the gospel to all nations? The united action of the press and the medical profession in the present crusade against tuberculosis is a striking example of what can be done by a union of forces which have hitherto stood apart. By the aid of the press we have accomplished more in five years than could the medical profession unaided by the press in a quarter of a century. With such a plain indication of our duty before us shall we still blindly follow a misinterpreted and misapplied ethical rule which has always placed our profession in an illogical position and been a serious bar to our greatest usefulness? The prevention and not the cure of disease will be the principal work of the profession in the future. We can accomplish little or nothing without the aid of an intelligent public. This same public will not accept the *ipse dixit* of the physician any more than it will of the theologian, and we must give a reason for "the faith that is in us," and in a way the public demands. No argument based upon a false notion of ethics will excuse us for any shortcomings of duty, with what is ever a fair and reasonable public. An assumed virtue or dignity which is not based upon common sense will receive the contempt which is its due.

The time has come for our profession to assert itself and to strive by all reasonable means to assume that position among the pioneers of knowledge to which it is clearly entitled. If we find any barriers which have been erected against us, or which in the wisdom of our forefathers in medicine have been erected by them, and we now find under the changed conditions which confront us are obstacles to the promotion of public interests, then these, too, must be broken down.

Free lectures to the public on selected medical subjects constitute one of the most useful methods of spreading information. These lectures should be given by men who are authorities on their subjects. The experiment has been tried in various parts of the country, particularly in Chicago, and has been a success. During the last three years these lectures have been so popular that at times people have been turned away for lack of room. A great metropolitan newspaper in our state is arranging to push the health propaganda as vigorously as was the agitation against slavery and other kindred evils. This department will be under the absolute control of one of the best men in our profession. The value of such a union of our forces with the secular press is beyond computation. Call such work as this advertising if you will. Whatever tends to bring out the best should be encouraged and not repressed, call it by what name you may.

Time was when the physician was known by his dress, stately bearing, pedantic manner, and air of mysticism which he maintained. Now he does not differ in dress or manner from the merchant, lawyer or other man of affairs. The influential and successful physician is a good "mixer." He identifies himself with every laudable undertaking in the community. By this means he maintains and retains a hold upon the people he could not by assuming the air of mystery and

exclusion so common to our forefathers. The old time physician would hardly find a place under the new conditions imposed by our modern civilization. In this intensely practical age there is no place for men or things whose only claim for recognition is because they bear the musty flavor of age. Ours is classed as a liberal profession. Let us show our liberality by conforming to new conditions as they arise. We should use the press without self-advertising, which we all rightly condemn, but to discuss medical questions which are vital to the public is not only not unprofessional, but is of right demanded by the public.

We can hardly overestimate the good that may be accomplished for the public and our profession by such a use of the secular press as I have outlined. The stock argument that such a use is advertising should no longer serve as a bug-bear to deter us from our plain duty. Our hold upon the public will depend not alone upon the correctness of our medical views, but having them understood as well. The public will understand just in proportion as we avail ourselves of those agencies presented for our use. The greatest of these is the secular press.

As suggested by President Burrell in his address at the last meeting of the American Medical Association, "the medical profession must recognize and cooperate with business men in these public duties which is a new duty of citizenship," and in concluding that very notable address he said: "A great duty rests upon the practitioner of medicine today. He must not shirk it. He must rise to his new burden, accept it and bear it. The reward of the medical profession for taking this new burden of judicious publicity in medicine will be a broader life for the practitioner, a greater consideration for his fellowmen, better citizenship and the recognition by the world that the medical profession is a great public benefactor."

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## HYGIENE OF THE SCHOOL CHILD.\*

J. W. VAN DER SLICE, M.D.

CHICAGO.

The state demands the attendance at school of each child of school age for five hours a day, five days a week. By right of equity the child has the right to demand that the state shall guard his physical and mental well being so as to discharge him at the end of his scholastic period physically and mentally capable. The purpose of this paper is to show to what extent the school authorities are protecting the child in regard to the hygiene and sanitation of the school building as found by investigation of seventy-nine of our city schools. The methods used in the investigation were (a) reference to the publications of the Chicago Board of Education, (b) correspondence with a large number of principals and teachers, (c) personal inspection of school buildings.

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The most important desiderata for the school building are good air, plenty of light, and freedom from disturbance of noise. The school should be on a quiet street, the building be set well back and surrounded by a large yard. Here, however, it is found that the schools are on the main thoroughfares and car lines, with the building approximating the front margin of the lot. Of the 79 schools 13 had no playground, 20 had playgrounds of less than a square yard per pupil, while in 45 the playground contained more than a square yard per pupil.

*Outdoor Recesses.*—In the primary grades the schedule calls for an outdoor recess in each session, but, as there is no provision made for a covered area, in stormy or inclement weather the outdoor recess can not be had. In the other grades there is a tendency to dispense entirely with outdoor recesses and the child is confined for a period of three hours.

*Lighting Facilities.*—The location and age of the school buildings were the important factors as regard the light. The closely shut in buildings were markedly deficient in the amount of light. There was no artificial lighting arrangements for the dark days which was a distinct hardship in a considerable portion of the schools. At many of the schools there were found portable buildings. These are one-room buildings that are set up in the school yards of the schools that are overcrowded. The use of such rooms in a city with the changing centers of population is, no doubt, essential, but it is to be remembered that, placed between high buildings, with no means of artificial light, they are a distinct step backward from the hygienic point of view.

*Blackboards.*—In the poorly lighted rooms there was no lessening of the blackboard space, which absorbs much light. Though the blackboard work is much lessened in the modern school as compared with that of a few years ago, the blackboard space remains the same. The use of large blocks of paper and oil crayons would lessen the absorption of light and do away with the chalk dust nuisance.

*Ventilation and Heat.*—In 26 of the buildings there was no system by which fresh air was supplied constantly. In the other schools the methods were entirely unsatisfactory. In these the competence of the system depended upon the cooperation of the principal, teachers and janitors. The opening of a door or window had the effect of entirely deranging the flow of air. The buildings were not aired and it was the custom for the stale air to be warmed and rewarmed to save fuel during the colder weather.

*Cubic Space Per Pupil.*—The amount of air space allowed per pupil was estimated in floor space and no attention paid to the height of the ceiling, as it was believed that any height over 12 feet was of no effect upon the air content. The number of square feet per pupil ranged from as low as 10 square feet in the primary grades to 35 square feet in the upper grades.

*Care of the Rooms.*—The rooms are swept usually each school day with a broom or brush and the use of wet sawdust is customary. The

rooms are supposed to be scrubbed once in two months. In 40 of the schools they were found to be scrubbed once each term (three times a year) and in 15 once a year. The walls were washed or calcimined in 14 schools once in 3 years, in 40 schools once in 5 years, in 23 schools once in 10 years or never. The desks were washed when the floors were scrubbed. In dusting the dry and wet methods were used in about an equal number of schools with about equal efficiency.

*Cloak Rooms.*—Here are hung the outer garments of the pupils from all grades of home environment and it is manifestly unfair that the clothing of the clean should be hung with those of the dirty in a room with little or no ventilation. The ventilating shaft should be located in the dressing rooms and a telltale should show the constant current of air. Moreover, the cloak room should have no entrance from the hall and the two entrances from the school room should allow not only free circulation of air, but also a view of the major portion of the room from the teacher's desk. The number of petty stealings occurring is enormous and the moral effect of this style of cloak room would in a large measure act as a moral prophylactic.

*School Toilets.*—They were usually found to be dark and illy ventilated. In 14 schools the toilets were found to be in a bad condition.

*Water Supply.*—The drinking water is obtained through a bent iron pipe, over which the child places his mouth when drinking or uses a common cup. The benefits of the hygienic fountain are apparently unknown to the school board.

*Desks and Seats.*—In most of the rooms there are now supplied two sizes of desks and seats. The ages in the various rooms have a range of four to eight years. The variations in height of the pupils in a room was frequently over eight inches.

*Number of Pupils Per Room.*—The number of pupils per room ranged from 30 to 53, the higher number more usually occurring in the lower grades.

*Average Age for Grade.*—The ages were taken at the first enrollment of the year.

#### THE AVERAGE AGE OF THE PUPILS OF THE VARIOUS GRADES.

First grade.....	6 years 6 months.	Fifth grade.....	11 years 3 months.
Second grade....	7 years 11 months.	Sixth grade.....	12 years 4 months.
Third grade.....	9 years 1 month.	Seventh grade...	13 years 4 months.
Fourth grade...	10 years 7 months.	Eighth grade...	13 years 11 months.

The percentage of promotions from grade to grade was:

First grade.....	60 per cent.	Fifth grade.....	82 per cent.
Second grade.....	84 per cent.	Sixth grade.....	85 per cent.
Third grade.....	87 per cent.	Seventh grade.....	89 per cent.
Fourth grade.....	82 per cent.	Eighth grade.....	94 per cent.

The percentage of pupils in the various grades, taking the number of pupils in the first grade as 100 per cent, was: Second grade, 85 per cent.; third grade, 78 per cent.; fourth grade, 71 per cent.; fifth grade,



68 per cent.; sixth grade, 55 per cent.; seventh grade, 43 per cent.; eighth grade, 33 per cent. These figures graphically portray the inefficiency of the present methods in the intellectual development of the child. The first grammar grade having but 68 per cent. of the first grade and the first year high school but 13 per cent., demonstrates the fact that the schools do not fit the child for life to the mind of the average parent. During the first and second grades there occur the majority of the cases of infectious diseases. However, the school board makes no effort to curtail the number of these preventable diseases by any sanitary measures. Pupils using free text-books are given books previously used by other pupils, and, regardless of the contagious diseases the previous user may have had during the time of his possession of it, there is no attempt made to sterilize it. The schedule is arranged with but two ideas in mind, to fit in with recesses and to have the harder studies early in the session. Sample schedules taken at random from the different schools were found to have the same lesson periods for all of the grade. No attention is paid to the physiological fact that a child six to nine years of age can not apply the attention to the same subject for more than fifteen minutes without undue strain. In many of the schools the first lesson period, which supposedly is of the hardest study, has a lesson period of forty minutes in the primary grade.

The causes contributing to the delinquency of the school child, emanating within the school, as given by the principals were:

Too much school work required.....	44
Poor preparation in the earlier grades.....	35
Improper school seats.....	6
Too long school hours.....	5
Insanitary school conditions.....	4
Too many pupils in a room.....	8
Too early admission to the school.....	6

#### CONCLUSIONS.

The hygiene and sanitation of the schools of the city is a menace to the health of the school child.

A Board of Education composed of a score of political appointees is not the ideal management for the public school system. This is given especial emphasis when the board does not consider drunkenness on the part of its engineers as sufficient grounds for dismissal when the engineer has the welfare of 1,000 to 1,500 pupils in his control.

There should be a commission of physicians, with proper authority, to act as an educational health board for the proper safeguarding the health of the school child. They should be the final arbiters in all matters of hygiene and sanitation and should indicate the mental and physical ability of the pupil, thus giving the child that protection which the state owes to the child in guarding his well-being during his school life.

## SCHOOL PLAYGROUNDS \*

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CHICAGO.

The question of the relationship of physical well-being to the body politic is becoming, as you are aware, a very burning one. Fragmentary legislation, sporadic cases of control, efforts to bring the regulation of health conditions under the general influence of legislative enactment, are very familiar to you. It is true, however, that these efforts thus far are unsystematic and all the time under the jeopardy of judicial discredit. I think, however, it is safe to say, it has come to pass that the state has awakened to its own consciousness of its obligations, not to any class of its citizens, but to itself, and upon that hypothesis the state has undertaken to establish its right to dictate what shall be the conditions of health, under the general broad provisions of police power. I think it is safe to say that the judicial view of legislative efforts in the direction of controlling conditions of living tend fully to support the contention that the state has a right with reference to preservation of its own integrity and welfare to take the broadest cognizance of health conditions under this general idea of police power. That is very good so far as dealing with our fixed or current conditions is concerned. But I want to call your attention to the fact that the broadest exercise of police power by the state, after all, deals with the problem in masses, and consequently can deal with phases of the problem and influences bearing upon the problem which are simply operative under mass conditions. Not only that, but hitherto the state, in dealing with those conditions, for the most part, has contemplated and dealt with terminal conditions—conditions in which damages to the developed people, as distinguished from the children, have already been brought about, and the consequent good which can be accomplished by state control of all classes of individuals is comparatively limited. If we are to have general physical perfection in our people, we must have perfection which is based upon individual quality, individual development. How this is to be accomplished is the greatest problem in health matters to-day.

The personal conduct of individuals is largely a matter of habit. The most personal habits of individuals with respect to physical matters are results partly of education and partly of imitation. Not only that, but the question of habit is perhaps the most difficult question from a therapeutic standpoint that we have to deal with. There is hardly anything so difficult to establish in our medical relation to the people as change of habit: even if beneficent, obvious, and perhaps of the slightest degree. So it is that we have to meet and control in this whole question of establishing individual perfection that great inertia represented by the double term of imitation and habit. The child habit fortunately, though it is as tenacious in principle, is far less fixed in fact: and it is

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\* Read before the Chicago Medical Society, March 3, 1909.

well recognized by all educated sociologists and by all physicians that the place to accomplish radical, fundamental and progressive changes, mental or moral, is in childhood.

If it is true that childhood offers opportunity to influence individual development of all kinds, we must come to the conclusion that the place where it is most worth while for us to put in our time and effort in the direction of physical superiority is upon the child. And then the question arises. How shall we do it? I may be mistaken in my opinion about this, but my opinion nevertheless is very fixed: no great progressive movement amongst children or adults, and particularly amongst children, ever came as a matter of compulsion—I mean primarily and finally compulsion. Whatever compulsory factors may enter into it in various particulars, compulsion does not afford a reasonable pathway to physical perfection of the individual. What, then, is there left for us to consider? So far as I can see—and this goes right along from babyhood up to and through adolescence—the only way we are ever going to establish a broad conception of physical well-being and physical perfection, a *conscious* desire on the part of individuals for physical perfection, is by the establishment of some kind of ideal to which the individual shall adhere, and with which his conduct in life shall in some degree or other square. It is just upon that point I start my argument of choice for a playground. How are we going to create an ideal on which the child shall build in this question of physical perfection?

First, let me ask, What do we understand by playground? Do we mean simply an open space in which the children are to romp? Of course, better than nothing. Any form of play which provokes boisterousness, or anything incident to it, is far better than inactivity and confinement for children. But that is not the best play. What we mean by playground, in the modern sense, is an open space, equipped with various paraphernalia, designed to be, at the same time, attractive to the children and developmental under the use of the children. We are not talking about conditions of play for children in the country, but about urban conditions, where there are no open spaces, no resources, nothing except what the state offers to the child in connection with public parks or the public schools. Under those conditions and in that line, what we mean by playground is a sort of outdoor gymnasium. How are we going to utilize such an outdoor gymnasium for the purpose of creating an ideal to which the child's developmental tendencies shall be brought into harmony? That is a matter of intelligence and ingenuity on the part of the instructors who are related to this work, and if you think that it is a negligible matter you are vastly mistaken. What can be accomplished in stimulating children to useful, purposeful, developmental work in connection with the playground is something far more than I can describe briefly.

It is of the utmost importance, however, to recognize that children have their natural ideas, and any student of psychology will say that the process which aims to develop children has got to follow the course

of child psychology. Consequently it requires a great deal of study to know what to do with a playground with reference to the aggregate mass of children. Children, of course, are imitative, and to a very large extent the good or bad in a mass of children will prevail according to various conditions, depending on their imitative tendencies; but, more than that, children are emulative. Children tend to want to excel, provided the basis of excellence that can be established in connection with playgrounds is obvious. For instance, let me illustrate lest I may seem obscure. Dr. Guliek, of New York, is the great master of the playground, and in developing one scheme after another in the evolution of the work he has discovered that one of the most potent influences he can bring to bear is a certain pride that children can be made to have in definite performance, the evidence of which is shown in wearing a certain kind of button in the button-hole. For instance, chinning up on a parallel bar so many times belongs to a given class of children and has a definite sign button. So it goes on from phase to phase in the development of exercise, changing the insignia as the things go on to the extent of absolutely bringing the whole body of children into an emulative frame of mind. Bear in mind there is a great difference between the emulative and contesting frame of mind.

Not only are these things strong in their tendency toward physical development and superiority, but physical superiority is to a very large extent exclusive of mental and moral delinquency. That is one of the great principles which, I think, is established. The tendency of good health and good physique is to exclude degenerate and deteriorating influence in life, and so as a moral effect, as a prophylactic, as a character-breeding, or as a citizen-breeding influence, I have no hesitation in saying that the playground could be made greater than the school curriculum, and I have considerable hope that it will be a dominant factor before the school curriculum shall have been satisfactorily adjusted.

Of all our problems the problem of great importance in the way of dependency, disease, inefficiency, whatever you choose to call it, harks back in the last analysis to physical vigor. Laboring men have come to realize, sociologists have come to recognize, that the great industrial problem to-day is health, not wages, nor shop rules, nor unions, but health. That being the case, could there possibly be any greater argument for the development and universal recognition of the dignity of the playground in the school curriculum? If conditions of physical perfection, conditions of physiologic good habits, of normal and sound hygienic methods of living, tend to exclude in the child vicious habits of growth, mental or moral, how much more is it true as applied to adolescent and adult considerations? There is no influence, I feel convinced, that can be brought to bear upon the body politic in the direction of sanity and morality and general integrity than the influence which can be developed out of a judicious and intelligent utilization of the school playground principle.



## TUBERCULOSIS. ITS TREATMENT WITH TUBERCULINUM KOCH AND AN INDEX TO DOSAGE.\*

LOT SNODDY, M.D., PRESENTED BY WALTER B. METCALF, M.D.

CHICAGO.

It seems pertinent that we should at this time, when there is so much conflict of opinion as to the best method and remedies to be used in the treatment of tuberculosis, report some of our work and the results obtained by the use of Tuberculinum Koch. The original of this work was begun by Dr. Snoddy in 1896, and it is due to his efforts that we are able to present this report. The pendulum has taken a long swing out into the open air, the rarified air, the tented air, but is coming back, slowly but surely. The poor afflicted ones have been driven away from their homes and home comforts, made to believe that a change of climate would cure them, that Colorado, Arizona, New Mexico or some similar locality contained within its confines the only safe and effective remedy for tuberculosis. That their going there would bring about a speedy recovery, drugs were of no value, that they needed nothing more than the change of climate. Life in the open air has also been taught to be the only cure for this disease, and many of the medical profession and all of the press have endeavored by their advocacy of this method to show that the open air and tent life is a cure for tuberculosis.

Overfeeding and stuffing, which obstructs the functions of digestion and assimilation, should not be preached to those in whom we already have an impaired gastric function. Overfeeding will depress and injure the gastric functions of a healthy man. The consumptive can not gain health by following such advice. We often hear people say, "Oh, I know how to treat consumption; I read it in the paper: you just take all the milk and eggs that you can eat and sleep in a tent and you will get well." These things have been made so prominent that we find great difficulty in persuading tubercular patients to conform to a strict medical regime.

We would not belittle the value of fresh air and a generous wholesome diet in the treatment of tuberculosis; in fact, we know that they are of vital importance; but they are not all that can be done in the way of treatment. In our opinion the ideal treatment for tuberculosis is a combined treatment, and we believe that in this combined treatment, which embraces hygiene, dietetics and therapeutics, the drug par excellence is tuberculinum Koch. This substance, administered according to our method, comes as near being a specific for the cure of tuberculosis from a drug standpoint as mercury is for syphilis.

Proof of this claim is best demonstrated by the results obtained by medical men in different parts of the world, who have found value in its use as a remedial agent in the treatment of tuberculosis. It is not a new remedy; it has been tested in the crucible of time and is being found out. The only dissenting voices are those who claim that

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\* Read before the Chicago Medical Society March 17, 1909.

they are afraid to use it; that harm has been done with it; that it is dangerous, and so forth, and we will say the same of a gun; but, in the hands of a good marksman, the gun is harmless, on the one hand, and very effective, on the other; and we ask the question, if their failure to obtain good results by the use of tuberculin might not lie in the faulty administration of the remedy, as to the size of the dose or as to the frequency of its administration, or be due to a failure to appreciate fully the susceptibility of the individual or be due to the use of an inferior tuberculin.

It is in the determining of these important questions that we obtain great help from our "temperature index" and the "opsonic index." for by the use of these standards we can better guide our treatment and keep on the safe side.

By the "temperature index," which we have used for the past thirteen years, we can determine, first, the size of the dose of tuberculinum to be given in each case; second, the frequency of its administration; third, by it, judge accurately the improvement in our patient. The temperature index is determined by and based upon the following conditions:

*First.*—We determine what is the daily high temperature of the patient; this we call the "normal" for the individual.

*Second.*—If, after giving an injection of tuberculinum, we find that the temperature rises above the "normal" for the individual, we know that the dose is too large.

*Third.*—We call this rise above the "normal" for the individual a "reaction."

*Fourth.*—If, after giving an injection, we have no rise in temperature or "reaction," we increase the dose and keep on increasing it to the "reaction" point.

*Fifth.*—The "normal" for the individual can be determined from time to time by taking the temperature the day before the injection.

The "temperature index" reads: If you have a "reaction," decrease the dose; if you have no "reaction," increase the dose; if you have a reaction, your patient is not improving; if you have no reaction, your patient is improving.

Soon after Wright advanced the opsonic theory, we began a series of comparisons and found that they move together; that when the temperature index indicated improvement in the patient it was shown by the opsonic index that the resistance was improved, and, on the other hand, when the temperature index showed that the patient was not improving, the opsonic index indicated a lowered resistance; these associated conditions being noted in every case where comparison was made. As compared with the opsonic index, the temperature index is a bedside clinical test, simple, inexpensive, while the opsonic index is a laboratory test, expensive and difficult to procure.

We believe that the thermometer is as good a guide as to the progress that the tubercular patient is making under the use of tubercu-

linum as the opsonic index is and it gives it to us each day. We experience no difficulty in the use of tuberculinum Koch in the treatment of patients with an abnormally high temperature; we do not find that the high temperature is a contraindication to its use. We know that harm can be done with tuberculinum; also with many other remedies; but that fact should not be a sufficient reason to lead to the reckless condemning of this remedy; many of the ill effects attributed to tuberculinum have been only accidental, concomitant.

*Diagnosis.*—Tuberculinum as an aid in making a positive and early diagnosis of tuberculosis has no equal; it makes it possible for us to make the diagnosis long before we can hope to do so by the other means at our command; make it before great destruction of tissue has taken place and before resistance has been lowered and at a time when repair is easy and certain. Great care should be taken, even in the use of tuberculinum, for making a diagnosis; the method employed is of vital importance from a danger standpoint. To us there seems to be but one safe method and that is the subcutaneous administration. We would especially condemn the Calmette method, believing it to be dangerous, for why should we jeopardize the sight of an eye to come to a conclusion that can be arrived at more certainly by a harmless method? There is no more danger in giving a dose of tuberculinum for diagnostic purposes than there is in giving an anesthetic for similar purposes.

*Prognosis.*—We find that after giving a test dose of tuberculinum, the intensity of the reaction, the character of the reaction and the time consumed in its rise and fall above and below normal indicate the severity of the lesion. This knowledge aids us in making the prognosis.

*Treatment.*—Our use of tuberculinum Koch as a remedial agent in the treatment of tuberculosis extends over a period of 13 years, during which time we have treated and cured many cases. By the use of the temperature index as a guide to its administration we are able to soon give a dose of tuberculinum large enough to impair the activity of the tubercle bacillus without doing harm to the patient. Under these increasing doses the night sweats stop, the temperature comes down, the cough become less and less, the toxic symptoms become less marked, and the patient begins to show improvement in every way, and it continues as long as we follow the temperature index guide. But the improvement does not take place when the dose given causes a "reaction." In support of our claim we herewith report 36 cases, tabulated from Dr. Snoddy's record sheets, that were treated with tuberculinum more than 8 years ago, with 6 deaths and 30 recoveries, giving a record of 82 per cent. of recoveries.

*Briefly.*—Number of patients treated, 36; period during which they were treated, 1896 to 1900; average age, 27 years; family history was positive in 25 cases; family history was negative in 11 cases; males treated, 15; females treated, 21; hemorrhages had occurred in 6 cases; attack following la grippe, 8 cases; attack following pneumonia, 5 cases;

tubercular bacilli present in the sputum, 23 cases; tubercular bacilli absent, 3 cases (These microscopical examinations were made by the Columbus Medical Laboratory); pulmonary involvement, 33 cases; glandular involvement, 3 cases; recoveries, 30 cases; deaths, 6 cases. These were all indigent cases, the patients living in vile rooming houses or in the rear of lots with the windows opening in the alley or courts; during treatment they had no nursing (often even very indifferent family care), were obliged to live upon poor food, and many times on insufficient quantity. These patients had not been educated by an efficient health department in the value of fresh air. In these records no cases are classed as cured short of two years after discontinuance of treatment; all cases were tested with double the initial test dose of tuberculinum to see if they would give any reaction.

Some of the cases mentioned in this report are still under observation. We have not known of a relapse or recurrence of a single case thus treated with tuberculinum Koch and classed as cured.

We have observed, however, that some of the patients treated and pronounced as being cured by the climatic or fresh air treatment react to test doses of tuberculinum; also, that many of these cases have relapses or renewed infections. We claim that these cases have not been cured, but that the activity of the tubercle bacillus has only been arrested; that the bacilli has not been destroyed, but remained quiescent; in other words, climatic and fresh air cures only bank the fires, holding it for some adverse physical condition to open the draft again and the patient usually dies. We know clinically that one attack of most of the acute infectious diseases, when followed by recovery, produces an immunity to that disease.

We believe that one attack of tuberculosis, if followed by a complete recovery, either spontaneously or by the use of tuberculinum, produces an immunity to the disease in that individual. In further support of this claim the known frequency with which healed tubercular lesions are found in postmortem examinations would indicate that one attack often produces an immunity.

Our claims for tuberculinum Koch:

*First*.—That it is a positive early diagnostic agent for tuberculosis.

*Second*.—That it has a prognostic value as shown by the temperature index.

*Third*.—That it is a specific for the treatment of tuberculosis to the same degree as other sera when the same conditions are applied—namely, early use, an efficient dose and general hygiene.

*Fourth*.—That it is a specific for immunization against tuberculosis to the same degree as the other sera.

*Fifth*.—That it renders the tubercle bacillus sterile; that the patient is made immune to the toxin and bacteriologically.

These claims are based upon the following:

*First*.—Extensive clinical work as proof.

*Second*.—Testing with double the initial test dose as proof.



*Third.*—By comparison with the known course of many other acute infectious diseases as proof.

*Fourth.*—The establishment by other investigators of the fact that tuberculinum produces a toxic immunity to the bacilli.

In the interest of humanity we plead for the more liberal consideration of tuberculinum Koch as a remedy for the treatment of tuberculosis; it will cure tuberculosis and, in our opinion, will produce an immunity to the disease to the same extent that vaccination does in smallpox.

While we emphasize the relative ease of our temperature index in its application as compared with the opsonic index, we, nevertheless, are compelled to admit that the correct use of the temperature index in the cure of tuberculosis can only be acquired by extended observation of the work of others experienced in its use or extensive clinical trial, which is expensive to human life.

Our late records of cases treated show an average of 90 per cent. of recoveries and we are firmly convinced that 95 per cent. of recoveries is not too high to place the results of our use of tuberculinum Koch in the future treatment of tuberculosis.

100 State Street.

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## INDICATIONS AND LIMITATIONS FOR THE USE OF ANTIGONOCOCCIC SERUM.\*

ROBERT H. HERBST, M.D.

CHICAGO, ILL.

In March of last year I read a paper before this Society on the serum treatment of gonorrhea and reported 52 cases. These cases were divided into six groups, as follows:

1. Acute gonococcus infection of the anterior or anterior and posterior urethra, with or without infection of the prostate and vesicles. This group included 17 cases.
2. Subacute gonorrhea of the anterior urethra or anterior and posterior urethra—9 cases.
3. Chronic gonorrhea of the anterior and posterior urethra. Most of these cases were accompanied by a chronic prostatitis. 11 cases.
4. Acute gonococcus infection of the epididymis. Four cases.
5. Acute gonococcus infection of joints. Four cases.
6. Chronic gonorrhea of joints. Seven cases.

In the first four groups—namely, the infections of the urethra, prostate, epididymis, etc.—I found that the serum was useless. All local treatment was omitted during and following the injection of serum, and in no instance was I able to see any beneficial effect on these cases. They were all given the serum in large doses, 6 c.c. to 8 c.c. Starting

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\* Read before the Meeting of the Chicago Medical Society, March 26, 1909.

with an injection of 2 c.c., and followed by injections of 6 to 8 c.c., repeated until a total of 24 to 30 c.c. had been given.

In the fifth group, the acute gonococcus infection of joints, my results were no better than in the cases just mentioned. I have applied the term acute gonococcus infection of joints to the cases in which I was able to demonstrate the germ from fluid aspirated from the joint. The term chronic gonorrheal joints has been applied to the cases of painful joints which accompany or follow a gonococcus infection in some other part, usually the urethra. I desire to make a distinction between these cases, which I think are due to a toxemia, and the cases termed acute gonococcus infection of joints, which are due to an infection with the germ.

In the last year I have used the serum only in these joint cases, with excellent results in almost every instance. Twenty-four cases have been treated. In 4 cases the patients did not show any improvement. In 2 of these, however, I was able to demonstrate the gonococcus in fluid aspirated from the affected joints. In the other 2 aspiration was refused, but I feel convinced from the clinical picture in both of them that they were infections of the joints and not toxemias. Of the 20 cases in which my results were good 6 of them were of a very acute type, the joints being greatly swollen and extremely painful and tender. I will briefly give the history of a case of this type:

H. B., a physician from the Pacific coast, contracted gonorrhea about two years ago. The infection in the urethra was promptly followed by an endocarditis, an attack of iritis, and three successive attacks of epididymitis. The patient was just about recovering from the third infection of the epididymis when both knee joints became very painful and swollen. He was taken to New York and was given treatment with Bier's hyperemia, accompanied by many forms of internal medication, for two months, without any relief. He then requested that the serum be tried, but the surgeon refused, stating that he had not had any experience with the serum and he did not care to experiment on a colleague. Not obtaining any relief after six weeks more of the treatment mentioned, he persuaded a male nurse who was taking care of him to get a quantity of the serum and inject it. This was done, with considerable relief after the second injection and almost complete relief from pain after the fifth injection. I had an opportunity to examine him four weeks later, and found him free from pain, but with considerable ankylosis of both joints. Needless to state, the great question in the doctor's mind was, Would he have had the ankylosis had the serum been used earlier? A most difficult problem to answer.

A number of questions have come up, both in my own work and from others who have used the serum, which I think might well be explained here.

1. Why do some cases in which the serum has been used with good results recur after a few weeks or months? Because the source of the toxic material has not been eliminated before the use of the serum. By this I mean the local infection should be cleaned up at the same time

or, better, before the serum is used. If we do not do this we are very likely to have a temporary relief of the joint condition, but sooner or later toxins will again be produced from the local infection, with the recurrence of the painful joints. I cannot too strongly urge the treatment of the local infection before or at the same time the serum is administered.

Another reason for the recurrence which we see in these cases is the insufficient quantity of serum given. We have found that unless the patient receives at least 18 to 24 c.c., and, better, 30 c.c., he is very likely to have a recurrence. I will give the history of another case which serves to illustrate this point:

C. W. contracted gonorrhea two and a half years ago. Three months later the right knee joint and left ankle joint became very painful and swollen. He entered the clinic at Rush College the middle of October, 1907. Upon examination we found that he was suffering from post-gonorrheal prostatitis; that both joints mentioned were swollen and painful, and that he was only able to walk with the aid of two canes. He was treated for the prostatitis, and after four weeks was given an injection of 2 c.c. of serum; this was followed by two injections of 6 c.c. at forty-eight hour intervals. He was greatly improved after the second injection and did not return to the clinic after the third, thinking that he was cured. About six weeks later he returned to the clinic in about the same condition as he was when he first entered. He was then given five injections of 6 c.c. each during a period of three weeks. He improved gradually, and after the fifth injection was entirely free from pain, although there still existed a slight disability from stiffness, which was probably due to adhesions; nevertheless, he had good use of his limbs, and, as I stated before, was free from pain. I saw him as late as last August and found him in good condition.

Another question which has come up is the partial relief that some users of the serum have noticed. Most of these cases are due to an insufficient dosage. Unfortunately, the serum has been put on the market in packages containing three small vials, each vial having the capacity of 2 c.c. On this account many have thought that this is a sufficient amount for a cure and have injected 2 c.c. at short intervals until the patient had been given the contents of the three vials. This is just one good-sized dose, and, as stated before, most cases require a total of 24 to 30 c.c. The heel pains, which so frequently follow the ankle cases, seem to be due in some instances to adhesions of the articulations of the astragalus, and we must not expect good results from the serum in these cases. I have made some observations as to the stability of this product, and have found that serum over one year old is not active. However, the makers are not placing any on the market that is over twelve months old, each package being dated, so there is no danger of obtaining an inactive serum. The serum is obtained from the uncastrated male sheep (the ram). The immunization requires ten weeks. The animal is given weekly injections into the peritoneal cavity. The first three injections are from dead cultures; the last seven from live

cultures. The cultures are grown for twenty-four hours on ascitic agar. The serum is polyvalent, each culture being taken from six to ten strains. Recently I have used a monovalent serum, but found the results about the same as with the polyvalent serum.

To sum up: If a correct diagnosis is made, and we must bear in mind that an articular rheumatic condition not gonorrheal may coexist with a gonococcus infection; if the condition of the joint or joints is due to a toxemia and not an infection with the germ; if the original focus of infection is cleared up before or at the same time the serum is administered; if the serum is given in sufficient quantity, then I think antigonococcic serum will give the results expected of it.

My conclusions are about the same as they were a year ago.

1. The serum has absolutely no effect on acute gonorrheal infections, whether they exist in the lower urinary tract or in any other part of the body.

2. Its value in subacute and chronic cases is also very doubtful.

3. The value of this serum in the treatment of toxemic gonorrheal joints is without question. In the past these painful joints accompanying and following gonorrhea have been most resistant to treatment, both local and general, and I feel that we now have a remedy which will give rapid and permanent relief to the sufferers from this common complaint.

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## THE PRINCIPLES OF REVISION OF THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA.\*

FRANK BILLINGS, M.D.

CHICAGO.

### HISTORICAL.

The history of the formation and of the evolution of the national Pharmacopeia of the United States is fully set forth in the Eighth Decennial Revision, issued Sept. 1, 1905. In 1778 a small Pharmacopeia for the use of the military hospital of the United States Army was issued in Lancaster County, Pennsylvania, and in 1805 the Massachusetts Medical Society prepared a Pharmacopeia which was published in 1808. In 1815 the physicians and surgeons of the New York Hospital appointed a committee, which issued a Pharmacopeia in 1816. The outgrowth of the present Pharmacopeia dates from 1817, when Dr. Lyman Spalding of New York City submitted to the Medical Society of the County of New York a project for the formation of a National Pharmacopeia. The United States, according to this plan, was divided into four districts—Northern, Middle, Southern and Western—and each was invited to prepare a Pharmacopeia and to present the plan of each district to a convention which was to be called together in Washington, D. C. The Northern and Middle Districts held conventions and pre-

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\* Read before the Joint Meeting of the Chicago Medical Society and the American Pharmaceutical Society, March 31, 1909.



pared outlines of Pharmacopeias. The Southern and Western Districts did not hold conventions. The Pharmacopeias prepared in the Northern and Middle Districts were submitted to the convention held in Washington on Jan. 1, 1820. The drafts of the Pharmacopeias prepared by the Middle and Northern Districts were compared in detail and, with such additions as were thought necessary, were consolidated, and, after full revision, were adopted by the full convention and ordered to be published by a committee, of which Dr. Lyman Spalding was chairman. The first National Pharmacopeia was published in Boston Dec. 15, 1820.

Before adjourning the general convention of 1820 arrangements were made for issuing the second edition and arrangements were made for a general convention, to be held in Washington in 1830, for the purpose of revising the Pharmacopeia. Through a misunderstanding the various districts invited to participate in the convention did not elect the proper delegates, with the result that a convention was held in New York with delegates from the Northern and Middle Districts and this convention revised the Pharmacopeia of 1820 and published their revision in New York in 1830. In consequence of the dissatisfaction which existed in parts of the country which did not take part in the New York convention a second convention was called to meet in Washington early in January in 1830. This convention invited the participation in the convention of the Surgeon General of the Army and the Senior Surgeon of the Navy. The convention appointed a committee of revision, consisting of a chairman, two members each from Boston, New York, Philadelphia, Baltimore, Washington, Charleston, Lexington and Cincinnati. This committee revised the edition of the Pharmacopeia of 1820, which was published in Philadelphia in 1831. This Washington convention passed a resolution that a third convention called by the president to meet in Washington in January of 1840 to make a second revision, the convention to be composed of delegates from incorporated state medical societies, incorporated medical colleges and incorporated colleges of physicians and surgeons throughout the United States, each to elect a number of delegates, not to exceed three.

To the convention of 1840 there were invited committees from the College of Pharmacy of Boston, New York and Philadelphia, and from 1840 to the present time the Convention for the Revision of the Pharmacopeia has consisted of physicians and pharmacists. Succeeding conventions were held in each decennium in the city of Washington, the convention becoming larger in number with each succeeding decennium. Those who have participated in conventions up to the present time have consisted, as I have said, of incorporated national, state and local medical associations and societies, incorporated national, state and local pharmaceutical associations and societies, the United States War Department, Surgeon-General's office, the United States Department of Naval Bureau of Medicine and Surgery, and the Public Health and Marine-Hospital Service, each incorporated body or department represented by three delegates.

The conventions have met in Washington, D. C., and, after considering various phases of the subjects pertaining to the Pharmacopeia, have elected an official Committee of Revision with power. The Committee of Revision of the past has prepared the manuscript of the Pharmacopeia and has modified the text after consideration of the advice from members of the convention and from various sources, medical, pharmaceutical and otherwise, which the Committee of Revision has invited.

For the first eighty years of its existence the committee prepared the Pharmacopeia and were responsible for its financial management. At the meeting in Washington in 1900 arrangements were made for national incorporation. This was approved by the convention and a certificate of incorporation was drawn up and signed on the eleventh day of July, 1900. At the same convention a constitution and by-laws were adopted. At present, therefore, the Committee of Revision of the Pharmacopeia which was issued and made official September, 1905, became an integral part of the chartered organization of the United States Pharmacopeial Convention. The business management of the institution is vested in a board of trustees. The board of trustees are responsible for the finances of the Pharmacopeia Convention. This leaves the Committee of Revision free from financial embarrassment and enables them to give their whole time and attention to the work of revision.

The United States Pharmacopeia Convention of 1900 directed the Committee of Revision to prepare the eighth edition of the Pharmacopeia, which, as stated before, appeared in September, 1905. The convention also authorized the Committee of Revision to prepare and authorized the board of trustees to publish a supplement to the eighth edition if, in the opinion of the Committee of Revision, it was deemed feasible. Consequently the Committee of Revision of the Pharmacopeia Convention of 1900 is still an official body and will continue in office until the meeting of the next convention.

The next meeting of the United States Pharmacopeia Convention will, according to its constitution and by-laws, be held in the city of Washington, D. C., upon the second Tuesday in May, 1910. The president of the convention shall, on or about the first of May, 1909, invite the several bodies entitled to representation under the constitution to send delegates to the next meeting.

Already I have mentioned the corporations and departments of government which may elect delegates to the convention. Delegates appointed by the various corporations and which may take part in the convention do not become members de facto until their certificates of membership in the convention have been acted upon by the Committee on Membership.

Accordingly, the next Pharmacopeia Convention will be held in Washington in May, 1910. Delegates from all incorporated medical and pharmaceutical societies and colleges of the United States which have been in existence for five years prior to May, 1910, will be given representation in the convention, provided they present credentials to the

Committee on Credentials and Arrangements while the convention is in session; in addition the Medical Department of the Army, of the Navy and of the Public Health and Marine-Hospital Service will also have representation.

The convention will listen to an address by the president, who is Dr. Horatio C. Wood of Philadelphia, and will receive a report from the Committee on Revision appointed at the last convention, besides transacting such other business as may come before it. Then will follow the election of officers for the ensuing ten years, including a committee of twenty-five on revision of the ninth decennial revision of the Pharmacopeia.

Modifications of the eighth revision of the Pharmacopeia may be offered by any of the constituent associations and departments of the government or of any individual members thereof, these to be presented to the convention by the Committee of Revision.

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## A COMPARISON OF THE UNITED STATES PHARMACOPEIA WITH SOME FOREIGN PHARMACOPEIAS.\*

W. A. PUCKNER.  
CHICAGO.

Commenting on the criticism of the United States Pharmacopeia by physicians, a writer in a pharmaceutical journal compared the newly-aroused interest of physicians in the pharmacopeia with the expectations of a child who has received a new mechanical toy for Christmas. As the child expects impossible things of its toy, so the physician expects the pharmacopeia to be a pocket manual, a dose book, a book of therapeutics, a manual of pharmacology, and what not.

But the physician is not alone in making exorbitant demands of the pharmacopeia. As a teacher of chemistry, I have not been able entirely to suppress the wish, though I knew it to be unreasonable, that the book might be altered in certain particulars so as to adapt it better to my ideas of teaching. If it is considered that to the retail pharmacist it is a laboratory manual for the preparation of tinctures, pills, ointments, etc., that it contains a fund of reliable information in regard to the physical and chemical properties of the official substances, that to the chemist engaged in the examination of pharmaceutical products it serves as a text-book of analytical chemistry, while it is a book of legal standards to those engaged in the enforcement of the Pure Food and Drugs Act, it will be realized that the United States Pharmacopeia is a book of no small value. A comparison of our pharmacopeia with the pharmacopeias of other countries but emphasizes this opinion. But, while the United States Pharmacopeia is an exceedingly well prepared book, it is not beyond criticism. On the contrary, this, as well as any other scientific work, needs constant revision to keep pace with scientific advance

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\* Read before the Joint Meeting of the Chicago Medical Society and the American Pharmaceutical Society March 31, 1909.

and modern ideas. Since, in 1910, the pharmacopeial convention will be convened to formulate the general principles of the ninth decennial revision of the United States Pharmacopeia and to select the committee to whom the revision will be delegated, it is important that physicians and pharmacists should familiarize themselves with the problems involved.

To open the way for discussion, I wish to present some of the suggestions which have been made in connection with the proposed revision, and, since one can always profit by the experience of others, I will attempt to indicate how such matters have been treated or disposed of in a number of foreign pharmacopeias recently issued.

MAY THE TIME CONSUMED IN REVISION BE SHORTENED?  
SHALL SUPPLEMENTS BE ISSUED?

While the seventh revision of the United States Pharmacopeia became official four years after the convention of 1890, the eighth revision did not become official until 1905, that is five years after the convention of 1900. In view of the increasing time consumed in the revision of the Pharmacopeia, some have held that action should be taken looking forward to a more prompt revision of the Pharmacopeia. It has also been suggested that supplements to the Pharmacopeia should be issued. The manner in which this condition has been met in the revision of foreign pharmacopeias has recently been investigated most thoroughly by H. V. Arny of Cleveland (*Journal American Medical Association*, Feb. 27, 1909, page 693). In general it appears that none of the foreign pharmacopeias are issued more frequently than ours, namely, once in ten years. The time consumed in the revision of foreign pharmacopeias varies widely. The revision of the new German Pharmacopeia was begun in 1898, finished in 1899 and issued Jan. 1, 1900. On the other hand, the revision of the French Pharmacopeia, which has at last made its appearance, required fourteen years. The German Pharmacopeia was revised by a permanent commission appointed by the government, and the French Pharmacopeia was revised by a commission also appointed by the government. From the consideration of the conditions under which the various pharmacopeias are revised, Arny concludes that a speedy revision can only be obtained if the revision is carried out more or less directly under the supervision of the government.

Arny also studied the question whether or not a large revision committee tended to expedite the revision. He concludes that a smaller revision committee can work more expeditiously, but at the same time notes that two of the best pharmacopeias, the Swiss and the German, were revised by relatively large commissions. While, in some measure, Arny recognizes that commissions appointed by governments, especially if limited in number, could expedite the revision of the Pharmacopeia, he believes that this is so contrary to our form of government and to the spirit which pervades our country that he would regret to see any change made in the manner of selecting our revision committee and in the revision of the book. Arny notes that the short time in which the German



Pharmacopeia was revised is to be ascribed to the fact that the commission which carried out the revision is a permanent one, and he favors for this country the establishment of a more or less permanent committee of revision, which committee would also be in position to issue supplements to the Pharmacopeia as they were needed. Arny notes that supplements to the pharmacopeias have been issued in Austria, France, Great Britain, Italy and Japan.

In so far as the need of supplements to the Pharmacopeia applies to this country, attention should be called to the efforts which the Council on Pharmacy and Chemistry of the American Medical Association is making in the establishment of standards for proprietary as well as non-proprietary medicines. In regard to the latter, the Council is attempting to establish standards and to persuade manufacturers to market their products in compliance with the standards adopted. If the medical profession will accept the work undertaken by the Council, and will limit itself to prescribing those new remedies which have been considered of sufficient importance to be admitted to the book published by the Council, namely, *New and Nonofficial Remedies*, then the need for a frequent revision of the Pharmacopeia or the issuance of supplements would disappear. *New and Nonofficial Remedies* is issued annually, and to it could be admitted those new drugs which, for the time being at least, are considered of some value by physicians or at least are considered worthy of a trial. If these remedies really proved of merit, then at each decennial revision of the Pharmacopeia they could receive formal recognition.

Personally, it seems to me that such a procedure would be eminently satisfactory, especially so when it is considered that the hundred and one new remedies which are vaunted to the sky each year are all, or nearly all, forgotten in the next.

#### PERSONNEL OF THE REVISION COMMITTEE.

It has been held that physicians have not had sufficient representation on the revision committee to insure a book adapted to their needs. Arny has studied the complexion of the foreign revision committee and finds that the ratio of pharmacists to physicians varied from a board of all physicians in Great Britain and Austria to a proportion of 10 pharmacists to 7 physicians in Japan. In Germany, where the commission was appointed by the government, it is composed of 14 physicians and 13 pharmacists; in Switzerland, where the commission was also appointed by the government, it is composed of 19 consulting members—18 physicians and 1 veterinarian—and 30 working members—chiefly pharmacists and chemists. In Spain, the revision committee consisted of 3 physicians and 4 pharmacists.

Sollmann discussed the subject before the Section on Pharmacology of the American Medical Association (*Journal American Medical Association*, Dec. 12, 1908, page 2013) and proposed that, distinct from the committee which is to carry out the actual revision of the Pharmacopeia, there should be a committee to decide on the articles which are to be

contained in the book, and that this body should be composed of physicians or men closely identified with medicine. Sollmann's proposal is practical, and none, I think, can deny that physicians should be permitted to designate the drugs which they deem of sufficient value to be given official recognition. If this committee on admissions could see its way clear to consider those drugs only which have been admitted to New and Nonofficial Remedies, the revision of the pharmacopeia would be much simplified in the future.

#### ARTICLES TO BE DROPPED.

Many believe that the United States Pharmacopeia contains a considerable number of substances whose lack of medicinal value is generally recognized and which should be dropped from the next revision. It has been advocated also that the complex and often unscientific mixtures—the "shotgun" prescriptions, such as Compound Syrup of Sarsaparilla, Cox's Hive Syrup, Paregoric and Compound Cathartic Pills—should not be dignified by inclusion in the Pharmacopeia, but that these substances have their place in a formulary, such as the National Formulary, published by the American Pharmaceutical Association.

In our Pharmacopeia, under the letter "A," appear the following articles which have little use and which have often been designated as obsolete or worthless: *Acetum opii*. *Acidum sulphuricum aromaticum*. *Alumini hydroxidum*. *Anthemis* (chamomile flowers), *Apocynum* (Canadian hemp), *Aqua hamamelidis* (witch hazel water), *Argenti oxidum*. *Arseni iodidum* and *Auri et sodii chloridum*. Of these, with the exception of chamomile and aluminum hydroxide, none are mentioned in either the Swiss, Austrian or Swedish pharmacopeias. These pharmacopeias, however, contain articles which are as superfluous as those just named; thus, the Swiss Pharmacopeia contains *Acetum aromaticum*. *Acetum pyrolignosum crudum* (crude wood vinegar), *Acetum pyrolignosum rectificatum* (rectified wood vinegar). *Aether camphoratus* (a solution of camphor in ether), *Ammoniacum* (contained in the United States Pharmacopeia, 1890, but not in the present edition), *Aqua picis* (tar water) and *Aqua sedativa*. The Swedish Pharmacopeia contains *Acetum aromaticum*, *Acidum succinicum depuratum* (purified succinic acid), *Aqua carvi* (caraway water) and *Aqua petroselini* (parsley water). The Austrian Pharmacopeia, like the Swiss, contains Aromatic vinegar and crude wood vinegar. It also contains *Aqua carminativa*, *Aqua chamomilae*, *Aqua goulardi*, besides *Aqua plumbica*.

As a type of complex mixtures included in foreign pharmacopeias, the aromatic vinegar of the Swiss Pharmacopeia may be mentioned. It is made by extracting cloves, lavender flowers, peppermint leaves, rue leaves, sage leaves, wormwood herb, angelica root, sweet flag and zedoary. The German Pharmacopeia is relatively free from complex formulas, but it does contain Diuretic Tea, Emollient Tea, Laxative Tea and Pectoral Tea—the latter containing marshmallow, licorice, orris, colt's-foot and Mullein flowers. Similar complex formulas are found in the Austrian, Belgian, Danish and other pharmacopeias.

It, therefore, appears that the foreign pharmacopeias, in this respect, are none better than our own, and I am afraid that it will be some time before sentiment will agree to the elimination of ready-made and complex formulas from the Pharmacopeia. For myself, I am very much in favor of this, because nothing has so retarded medicine as the use of ready-made prescriptions. I would also agree that such complex formulas should find their place in the National Formulary. In regard to the latter, it should be remembered, however, that at the present time physicians are not consulted in regard to the preparations that are accepted for this book. However, the formulas contained in this book might readily, and by right should be, limited to preparations into which enter only those simples which are recognized in the United States Pharmacopeia or have been deemed worthy of trial by the medical profession and admitted to New and Nonofficial Remedies.

#### ARTICLES TO BE ADMITTED TO THE UNITED STATES PHARMACOPEIA.

Physicians are especially interested in the admission of new drugs. It is important that new and valuable medicaments should be made official as an indication of their value, and also to subject them to closer control as to purity and strength. It is equally important that new drugs which present no real advance and the present popularity of which has been created by those financially interested, or the value of which is due to the over-enthusiastic estimates of physicians who are clamoring for new drugs and who are ever ready to land that which is newest, should not receive official recognition.

Of the recently issued pharmacopeias, the Swiss Pharmacopeia contains the largest number of new remedies. Of the so-called synthetics—substances which have been exploited chiefly under patent or trademark protection—the following are noted by the name commonly used in this country: Salophen, Aspirin, Veronal, Salipyrin, Euquinine (quinine ethyl-carbonate), Heroin, Dionin, Lactophenin, Tannoform and Eucaine. Besides these, the following substances also are recognized: Agaric acid, Arecolin hydrobromide, Quinine tannate, Digitoxin, Mercury oxycyanide, Mercury salicylate, Sodium cacodylate, Antitetanic serum, Tuberculin and Vaccine Virus.

Salophen is also recognized in the French, Swedish and Belgian pharmacopeias; Aspirin is also found in the French, Swedish and Danish pharmacopeias; Salipyrin is found in the Swedish, German and Danish pharmacopeias; Euquinine and Tannoform are found in the Swedish pharmacopeia; Eucaine hydrochloride is found in the Danish pharmacopeia.

As an indication of the varying interest which new remedies have attracted in different countries, some which are contained in some pharmacopeias and were not mentioned before may be noted. The French Pharmacopeia contains Adrenalin, Apiol, Pyramidon, Exalgin—a remedy used in this country some years ago but almost forgotten now—Piperazine and Pyridin. The Austrian Pharmacopeia contains Protargol and Tannalbin. The Swedish Pharmacopeia contains Novocaine.

Tannalbin and Diuretin. Diuretin is also contained in the German as well as the Danish pharmacopeias. The Belgian Pharmacopeia contains Adrenalin, Silver proteinate (Protargol), Tamin albuminate (Tannalbin), and Diuretin.

#### NOMENCLATURE.

The method of naming new organic substances is a burning question and one which chemists, as well as pharmacists and physicians, have widely discussed. While, on the one hand, there has been a tendency among chemists to name products so that their name might indicate the composition of the product, it has been found impractical to do this. As a substitute, chemists have agreed generally to adopt short names for certain groups and to distinguish the derivatives by proper prefixes to the group name. This is the plan which has been followed in the naming of new "synthetics" when these have been admitted to the pharmacopeia. Thus, just as sodium phosphate is the name which officially is given to the *secondary* sodium phosphate, so sulphonemethane is the official name given to the substance which is more correctly described by the name di-ethyl-sulphone-di-methyl-methane. I need not say that this name is one that has been severely criticised and many have held that physicians will continue to prescribe the proprietary product, Sulphonal, simply because of its shorter name. The same argument has been applied to the name Hexamethylenamine. Another criticism, which at times has been made, is that the Latinization of titles for such remedies only makes the name more difficult. Consultation of foreign pharmacopeias shows the following: All the pharmacopeias still give the preference to the Latinized titles, with one exception, viz., the French Pharmacopeia. This book gives, first, the French name of the article, then the French synonyms, and, lastly, the Latinized title. I take the position that Latinized titles might well be abandoned and that physicians could get along nicely if they would write their prescriptions in English. In reply to this it is held, of course, that Latin names are preferable because the Latin language—a dead language—is not constantly changing, that a Latin title once adopted will remain, while an English title will change as the language changes. That Latin titles are not very definite may be seen by comparison of the Latin titles in the several pharmacopeias. Thus, sodium nitrate in the United States Pharmacopeia is Sodii nitras; in the Swiss Pharmacopeia Natrium nitrienm. While in the United States Pharmacopeia saltpetre is potassii nitras, it is kalium nitricum in the Swiss Pharmacopeia and nitras kaliens in the Swedish Pharmacopeia.

As to the adoption of titles for the so-called synthetics, much divergence exists. The Swiss Pharmacopeia has adopted for those products where the names are no longer protected the common names by which the remedies are used. Thus we find such names as sulfonal and salol, while, on the other hand, eucaine hydrochloride is official under trimethyl-benzoxypiperidinum hydrochloricum.



In this connection a writer in a German Pharmaceutical journal, commenting on these rather cumbersome scientific names, suggests that, in view of the fact that the substances under their scientific names may be obtained for one-half the price of the proprietary articles, it is to be hoped that physicians will show sufficient interest in their patients to adapt themselves to these chemical names. I wish to make a suggestion: The name used in the United States Pharmacopeia for the substance sold variously under the names urotropin, methaform, formamin, aminoform, etc., is there given as hexamethylenamine; and this name, many hold, is sufficient to prevent the official article from ever replacing the proprietary brands. Would such names not be more easily remembered if they were hyphenated: or, since this German custom is not favored in this country, if the name was divided so as to make the two words: that is, hexamethylen amine?

#### THE PHARMACOPEIA AS A LEGAL STANDARD.

In conclusion, a reference to the pharmacopeia as a legal standard. While, in effect, the pharmacopeia has always been the standard, and a legal one, for the strength and purity of medicines, the recent attention which has been called to the adulteration and sophistication in foods and medicines, and especially the enactment and enforcement of the Pure Food and Drugs Act, has called attention to the pharmacopeia as a legal standard. It is perhaps in this respect more than any other that the pharmacopeia will have to be revised. At the present time, in attempting to be a little of everything, the pharmacopeia often fails in laying down definite standards, and prosecutions for the enforcement of such standards will no doubt be hampered thereby. Just one illustration: Sodium bromide, while ordinarily sold in the anhydrous condition, is also at times found on the market in the form of crystalline salt containing 2 molecules, or about 25 per cent., of water. According to the so-called purity rubric of the pharmacopeia, sodium bromide should contain, when dried, not less than 97 per cent. of pure sodium bromide. The test which gives directions for the determination of the amount of sodium bromide directs that the *well dried salt* should be examined. Under this wording the hydrous sodium bromide would comply with the pharmacopeial standard. A phrase in the preface to the pharmacopeia, dealing with the amount of moisture which may be present in chemical substances, does not aid in the interpretation of the pharmacopeial standard. In this respect the phraseology of the German pharmacopeia is much more satisfactory. Thus, under sodium bromide, we find the definite statement that 100 parts shall contain at least 95 parts of water free salt. In general, the phraseology of the foreign pharmacopeias, as related to the examination and testing of products, gives less general information than does the United States Pharmacopeia, but is more concise and better adapted when the pharmacopeia is to be used as a legal standard. An exception to this is the French Pharmacopeia,

which at times does not hesitate to describe the things which are not official. Thus, digitoxin in the anhydrous form is official, yet the pharmacopeia states that a form, containing 5 molecules of water, is often supplied. and it describes the general properties of this non-official substance.

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## HOW CAN WE MAKE THE PHARMACOPEIA MORE POPULAR WITH PHYSICIANS?

A PLEA FOR A PHYSICIANS' PHARMACOPEIA.

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It has been said—it is true, rather facetiously—that the most certain way of lessening the popularity of a medicine with physicians was to put it into the pharmacopeia. Even if this be not quite the truth, all will admit that the pharmacopeia is not as popular with physicians as it ought to be; and that this is one of the roots of the nostrum evil. Is there much in it to make it attractive to physicians? Is it not a pharmacist's rather than a physician's book?

Nothing is further from my mind than to belittle our pharmacopeia. It fulfills in a most excellent manner the purpose for which it has been created—namely, to name, define, and describe the most important and most commonly used drugs, giving tests for their purity and strength and formulæ for their preparations. Such a book is indispensable as the common meeting ground of the physician and of the pharmacist. But, while the pharmacist can not get along without possessing a copy of it, a physician who has a pharmacopeia finds very little use for it; and, therefore, very few physicians own one. The pharmacopeia contains but few of the facts that a physician must know in order to be able to prescribe, and many that the physician is not in need of. Would it not be well to have a book that would give in an authoritative, systematic, concise and yet complete manner all the facts that a physician might need in order to compose a prescription for any pharmacopeial remedy that he has not prescribed before?

Such a book should contain

1. The names of the drug—Latin name, English name, Synonym.
2. The physical characteristics of the drug—appearance, odor, taste, volatility, stability, solubility—the latter in considerable detail.
3. The chemical characteristics of the drug, including composition in case of compound drugs, for the purpose chiefly of teaching how to avoid incompatibilities.
4. Dosage—The average dose or doses, when different dosage has different effects; and the average frequency of repetition to obtain or maintain effect. The minimum fatal dose should be given wherever possible.

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\* Read before Joint Meeting of the Chicago Medical Society and the American Pharmaceutical Association, March 31, 1909.

Dosage for children might advantageously be added in connection with important drugs; for, with quite a number of medicines, the dose arrived at by the use of general age rules is either too large or not efficient. For external remedies strength of application should be noted.

5. Administration—Under this heading should be discussed the best methods known for prescribing the remedy in a pleasant and efficient manner.

6. Antidotes, antagonists and the treatment of poisoning might be added.

7. The preparations of the drug, each of which should be treated from the above named first five standpoints, giving, besides the name, the physical and chemical characteristics, composition, dosage, and methods of administration. If more than one preparation is official, the relative merits and special uses of each should be pointed out.

This would be the physician's pharmacopeia, which, it seems to me, every progressive physician would be glad to possess and would have occasion to make frequent use of. The size and shape of the book might preferably be such as to make it convenient to carry in the pocket. To give such a book the greatest degree of reliability, completeness, and therefore usefulness, a body of experts such as constitutes the committee of revision of the pharmacopeia would be required as its authors, and it should be published simultaneously with the pharmacist's pharmacopeia.

Briefly, then, my plea is to make the pharmacopeia so valuable to the physician that he can not afford to be without it, which, I believe, can only be done by issuing it in special form for physicians' use.

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## DIAGNOSIS AND TREATMENT OF CHRONIC CATARRH OF THE BOWELS IN THE LIGHT OF RECENT CLINICAL AND PHYSIOLOGICAL RESEARCH.\*

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Chronic catarrh of the intestines does not present any uniform clinical picture. The subjective symptoms, as well as the objectively demonstrable anomalies of the functions of the intestinal tract, vary widely according to the extent of the intestinal tract involved—i. e., whether the small or large intestine alone is involved, or both—according to the severity of the affection, the extent of the disturbance in the assimilation of food; also, according to the presence or absence of putrefactive and fermentative processes or complications in the adjacent organs, liver, appendix, etc. The great variations, both in the subjective symptoms as well as in the extent of the disturbances in the functional activity of the intestines in the course of a chronic inflammation, pre-

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\* Read at the meeting of the Northwest Branch of the Chicago Medical Society Feb. 5, 1909.

cludes the possibility of anything like the outlining of a uniform plan of treatment of this affection. In order to be able to institute a rational plan of treatment an attempt should be made in each individual case to ascertain, first, the anatomical location of the affection and the functional anomalies resulting therefrom; second, the condition of the stomach; third, complications; fourth, sequelæ. The localization can be divided into three groups: A, catarrh of the small intestines; B, diffuse inflammatory processes, involving both the small and large intestine; C, affection of the colon alone.

#### CATARRH OF SMALL INTESTINES.

Catarrh of the small intestines, especially of the upper segment, does not necessarily have to cause any increase in the frequency of the bowel movements. These can be normal, or even constipation may be present. The usual symptoms are those of general discomfort in the abdomen, a sense of distention, peristaltic unrest, eructations on account of the frequent presence of impairment of gastric function, the passing of large quantities of flatus on account of the excessive formation of gases as a result of fermentation, and, occasionally, by drawing cramp-like sensation usually located in the neighborhood of the umbilicus. As soon as the affection extends to the largest part of the small intestine and intestinal digestion is interfered with the imperfectly prepared chymus that pours out into the colon irritates its mucosa, causing thereby increased peristaltic activity; then the characteristic symptom of chronic intestinal catarrh, diarrhea, makes its appearance. Whenever the patient has three or four watery pultaceous or semi-solid evacuations a day it generally means that the location of the disease is in the small intestine, although the large intestine is then not wholly unaffected. The greater the involvement of the large intestine becomes the more prominent is the diarrhea. When a large part of the colon is involved the subjective symptoms from which the patient asks to be relieved are distressing intestinal unrest, borborygmi, a sense of distention of the abdomen, pressing, drawing, sticking, occasionally colicky pains, the diarrhea often becomes severe. The patient has a number of evacuations at night, and often immediately after meals, and even compelled occasionally to leave the table. The general condition of the patient suffers greatly, he becomes very much depressed, occasionally the diarrhea alternates with constipation. After several days of constipation, without any evident cause, diarrhea occurs spontaneously, continues from one to several days, then ceases and constipation again makes its appearance. Nothnagle compares this alteration of constipation with diarrhea to the variations of Cheyne-Stokes respiration. Constipation, he thinks, was originally present and persisted until, by the stasis of feces in the intestinal canal, a condition of irritation is produced which causes the diarrhea. After complete evacuation of the intestine constipation reappears. But why should there be any tendency to constipation? Among the various explanations given it was assumed by some that the function of the muscularis was impaired either by the



production of atony or from organic damage by degenerative atrophy. But, as no changes can be found in the muscularis of the intestine in chronic inflammation, this explanation had to be dropped. Again, Nothnagle's view has been quite universally accepted. He thinks that the cause of this constipation is probably due to a reduction in the automatic power of the nervous mechanism of the intestine, due to nutritional disturbances as a result of the chronic catarrh. Irritability to stimuli remain normal or even increased. In disease of the colon alone, especially of the descendens, there is usually constipation, a solid evacuation occurring every second or fourth day, occasionally only after the administration of a laxative. The patient complains then of habitual constipation, digestion is not disturbed, and the patient's general condition not impaired. All these symptoms enumerated, while valuable, do not unconditionally necessitate the diagnosis of catarrh, as this could be caused reflexly from a diseased liver, appendix, gall bladder and the like, or they could simply be an expression of general neurasthenia, the latter causing even diarrhea.

The most valuable and conclusive points toward a rational diagnosis are gained by the investigation of the intestinal functions. But, how can we obtain the intestinal juice for examination? Kuhn, and especially Hemmeter,<sup>1</sup> have endeavored to establish a method for investigation of the intestinal functions. Nothnagle, as far back as 1884, began a systematic study of the feces of patients suffering with chronic intestinal catarrh. Later Schmidt and Strasberger, by their excellent work, have put an end to all skepticism as to the invaluable and instructive information that can be derived from the feces examination. So that to attempt to treat a chronic intestinal catarrh without a thorough feces examination would be just as irrational as the treatment of stomach diseases without ascertaining its functions by the well-known methods at our command. In order to get reliable information in regard to intestinal function it is necessary to know what demands are made upon them and to what extent their tolerance has been taxed. For this reason the patient is given for a certain time a fixed and uniform diet, one that should cause no disturbances under ordinary conditions. Schmidt was the first to propose such a test diet consisting per day of 1½ litres of milk, 100 grams of zwieback, two eggs, 50 grams of butter, 125 grams of chopped meat, 190 grams of potatoes, 80 grams of oatmeal gruel. This diet, according to him, contains 2,254 calories. The patient is kept on this diet for two or three days. Half a gram of carmine could be given, if desired, with the test diet in order to be able to recognize the stool following it. There were some objections against this diet, especially against the milk. But it is impossible to dispense them in this paper. In the presence of catarrh of the small intestines the reaction of the feces is often acid. It has the odor of volatile fatty acids. It looks foamy from the presence of gas bubbles, resulting from fermentation. The color of the feces is green in consequence of failure of the bili-

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1. Archiv f. Verdauungskrank., 1896.

rubin to be converted into hydro-bilirubin on account of its rapid passage through the large intestine. An enormous increase of fat in the stool may be recognized by the oily consistency, pale grayish-yellow, or grayish-white fatty gloss, and floating on water. Mucus is present. On microscopic examination there is found numerous sharply defined muscular fibrous starch granules that yield the iodine reaction; large quantities of fat globules, neutral fat, or in the shape of crystals; also epithelial cells and muscle fibers stained by unchanged bile. Pus, when present, indicates some complication. Among the chemical tests two should be mentioned as valuable for the general practitioner. First, the test of Boas. Boas took the filtrate of feces and, without any addition whatever, subjected it to a digestion test by means of an albumin plate. Positive results indicate that the diarrhea originates in the small intestine. Nothnagle confirms this observation. Second, Schmidt's sublimate test for the presence of unchanged bile in the feces. This test is especially valuable when the macroscopic appearance of the feces does not show that. A small quantity of feces about the size of a bean is rubbed up in a porcelain dish with a concentrated watery sublimate solution. The mixture turns green usually after a number of hours if bilirubin is present. Urobilin gives a rose-red color. The passage of pure mucus or solid fecal masses covered with layers of mucus points to a catarrh of the rectum, sigmoid flexure or the lower segment of the descending colon. When no mucus can be seen with the naked eye but hyaline microscopic lumps of mucus are found to be intimately mixed with solid or pulpy stools catarrh of the upper part of the large intestine without the involvement of the lower portion is indicated. It may also point toward catarrh of the small intestine, but the result of the microscopic examination already referred to will clear up this point.

In catarrh of the whole large intestine mucus can be seen with the naked eye. Boas recommends lavage in the diagnosis of catarrh of the large intestine. A rectal tube is introduced as high as possible, about a litre of luke warm water is poured in, precisely as it is done in lavage of the stomach. The funnel is then lowered, the injecta siphoned off. If catarrh of the large intestine exists the recovered fluid will contain mucus that is readily demonstrable. The special form of colitis that is known as enteritis membranacea is distinguished by symptoms of spastic constipation, by high irritability and the simultaneous participation of the whole nervous system; by the expulsion of mucus or membrane hyaline or transparent, gray or brownish gray, firm or soft, white or shred-like. This disease occupies a special place in the affections of the intestinal tract and space will not allow to go into great detail concerning it.

A stomach analysis should be made in every case of chronic catarrh of the bowels. The gastric disturbances that might cause chronic diarrhea are absent or diminished HCl and atony. Einhorn, who described this disease of the stomach, which is characterized by the absence of

rhea are absence or diminished HCl and atony. Einhorn, who described

caused by the latter disease;<sup>2</sup> later Oppler,<sup>3</sup> Tabor,<sup>4</sup> Rosenheim, Küllner<sup>5</sup> and Schütz<sup>6</sup> laid much emphasis upon diarrhea of gastric origin. The last named author published a very extensive article in the *Deutsch. Archiv. f. Kl. Med.* in September, 1908, which covers the observations he made during the last nine and one-half years upon 143 adults, 12 children, out of which stomach analyses were made in 106 adults and 5 children. The principal symptom in all these cases was diarrhea. In 20 cases there was achylia, in 80 cases much diminished HCl, in 6 cases increased and in 8 normal. Twenty-five per cent. of those who had diminished HCl had at the same time atony. All these cases improved rapidly upon the proper attention to the stomach. The results obtained by this author alone show conclusively the absolute necessity of stomach analysis in all cases of chronic diarrhea. Rosenheim admits the possibility of a retarding influence upon the stomach by abnormal intestinal function, like the peristaltic unrest, for instance, and the stomach disease to be secondary. But this does not diminish the great diagnostic importance obtained by an accurate knowledge of gastric function in intestinal disturbances. How the diarrhea could be caused by complete absence of HCl can readily be understood. The increased demands upon the digestive powers of the intestine made by the defective stomach activity, insufficient connective tissue digestion, the loss of the disinfectant power of the HCl upon the ingesta, the disposition of the chymus to putrefaction, resulting from all this, can not but help act as a mechanical irritant on the walls of the intestinal canal. Aldor<sup>7</sup> considers the most important cause of diarrhea in achylia the loss or impairment of the compensatory activity of the pancreas.

The famous Russian physiologist, Pawlow, succeeded by his epoch-making experiments on dogs in demonstrating the close relationship between HCl and pancreatic secretion. He showed that the HCl in the stomach furnished the principal stimulus to pancreatic activity. Glasner<sup>8</sup> in 1903, who had a patient with a pancreatic fistula, was able to confirm these important facts. By administering to the patient HCl he was able to increase the pancreatic secretion two-fold. From the result of this experiment we can conceive easily how the gastrogenous or apeptic diarrhea originates. The deficiency of HCl eliminates the most important excitant to pancreatic secretion so that the intestinal digestion can no longer compensate for the inefficient gastric secretion. The knowledge of all these facts is of great help in putting the treatment on a rational basis.

The complications that might be present, and upon recognition of which the success of our treatment depends, are generally either in the adjacent abdominal organs or in the general nervous system. Appendicitis, both acute and chronic, cholecystitis, cholelithiasis and diseases of

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2. *Archiv f. Verdauungskrank.*, Bd. 1, 1896.

3. *Archiv f. Verdauungskrank.*, Bd. 3, 1897.

4. *München. med. Wehnschr.*, 1904.

5. *Berl. klin. Wehnschr.*, 1899. *Deutsch. med. Wehnschr.*, 1907.

6. *Deutsch. Arch. f. klin. Med.*, 1908.

7. *Deutsch. med. Wehnschr.*, 1908.

8. *Deutsch. med. Wehnschr.*, 1903.

the pancreas. It is well known how difficult it is to diagnose the latter, yet we may, after a thorough observation and analysis of a given case of intestinal catarrh, at least suspect, or even make a probable diagnosis, of inflammatory processes of the pancreas. Diarrhea in phthisical patients is often a significant indication toward tubercular ulceration of the intestine. In patients with a tubercular habitus a chronic intestinal catarrh is certainly a predisposing factor for the development of tubercular ulceration of the bowels.

The most difficult point in a good many cases is to differentiate a pure neurosis of the bowels from a catarrh. Pains, tenderness, meteorism, distention of the bowels, and disturbances of defecation, as has already been mentioned, are not pathognomonic of catarrh and could be present in pure neurosis. If we are able to find evidences of catarrh of the stomach and colon we could consider that fact as sufficient grounds for the assumption that the same anomalies are present in the small intestine. If, on the other hand, we find undoubted manifestations of disturbances in the general nervous system, we would be justified in drawing an analogy between the latter and the bowel affection. However, we might have a case in which stomach and colon affection are absent. Unmistakable evidences of general nervous disturbances present and intestinal affection still a genuine catarrh. Combinations of neurosis and catarrh not infrequently happen. The task of finding the positive border line between neurosis and catarrh is open for the clinician and we hope he will some day show it to us. At present it is possible that a long and careful study of each case will yet enable us to come at least within reasonable proximity to the solution of this question.

#### SEQUELÆ.

It is principally the diffuse and extensive affections of the small intestine that bring about disastrous effects. The general bodily nutrition suffers greatly, first, on account of the impaired digestion and assimilation; second, by the absorption of injurious materials from the intestinal tract. The close relationship between gastric and pancreatic secretion has already been referred to, but I wish to mention one more point, especially because I find no reference to that in literature. As we know, the intestines secrete a fluid that is known as succus entericus. The digestive action of this fluid was supposed to be insignificant. It was only considered to have a weak solvent effect on starch and an inverting action on sugar, and, therefore, as it could not play any important rôle upon the process of digestion, was entirely ignored. But the recent experiments with it by Pawlow<sup>9</sup> have with one stroke elevated it to a high position as a digestive fluid. Pancreatic juice obtained from a fistula only dissolved fibrin after 4 to 6 hours in a thermostat, and had not even attacked coagulated egg white after 10 hours, but, on the addition of some succus entericus, the fibrin was dissolved in 3 to 7 minutes and the coagulated egg white in from 3 to 6 minutes. So, then,

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9. The Work of the Intestinal Glands.



the intestinal secretion has an astonishing augmenting influence on the proteolytic activity of the pancreatic secretion. It can readily be conceived, therefore, how in the course of a chronic inflammatory process of the intestines the influence of the pancreatic secretion on the chymus could practically be eliminated because of the probability of the defective secretion of the intestinal fluid, and, secondly, on account of the inability of the pancreatic juice to act properly upon the chymus, as its action alone, as has been shown, is slow and the intestinal contents do not remain exposed to it long enough on account of their rapid propulsion by the usually increased peristalsis. This, then, shows how the process of intestinal digestion in severe diseases of the small intestine is so embarrassed that the chymus practically never reaches the degree of elaboration that is required for assimilative purposes. Nutrition then suffers, the patient becomes anemic and shows disturbance in the nervous system, suffers with insomnia, becomes irritable, hypochondriac, etc.

#### TREATMENT.

In cases which are connected with deficiency in gastric secretion the stomach should be given first attention. Schmidt says "the success that is derived by properly treating the stomach is simply astonishing." The treatment of achylia gastrica and hypo-secretion, while properly belonging to a separate chapter in medicine, is of such prime importance in chronic diarrheal diseases that it should not be dismissed without being more or less fully discussed. The diet deserves the first place. How can we increase the gastric secretion in cases where it is found to be diminished? This is fully answered by experiments of Pawlow and his pupils, especially Lang.<sup>10</sup> These experiments have shown that pro-teid substances furnish the most reliable stimulus toward the HCl secretion. From this follows that in the depressive anomalies of gastric secretion the free use of albuminous diet, especially meat, is indicated. The same view is also held by Hemmeter,<sup>11</sup> Herten,<sup>12</sup> Bach,<sup>13</sup> and others. In cases in which there is a complete cessation of gastric secretion the use of means calculated to increase secretion is of no avail. The stomach does not respond to anything known to us at present. The diet has to be arranged with two objects in view. First, the sparing and preservation of gastric motility; second, to find some means that would compensate for the defective proteolytic function of the stomach. Both of these conditions are met by the same means. Aside from the well-known necessity of thoroughly masticating the food, the mode of preparation of the food is of extreme importance. It should be given in liquid or pappy form. This, on account of its greatest case by which it is mixed with saliva during mastication, diminishes the exactions made upon the digestive function of the stomach, and, sec-

10. Deutsch. Arch. f. klin. Med., Bd. 78.

11. Diseases of the Intestines.

12. Therap. Monatsh., 1901.

13. Zeitschr. f. diätet. u. physik. Therap., 1903.

ond, by the more rapid passage through the stomach its motor power is spared a good deal. The food should taste well. It should look appetizing; in short, all the intricacies of the culinary art should be brought into play, as the appetite is often impaired in these cases.

When the test diet shows intolerance to proteids this should be partly eliminated from the dietary and gelatinous substances should be given instead. The great nutritional value of this substance has been known for a very long time. In 1679 Prof. D. Papin of Paris recommended decoctions obtained by long boiling bones, connective tissues, etc. In 1780 Rumford of Munich recommended soups made of bones and cartilages. This, containing principally glutin and chondrin, was used for a long time. Senator recommended this as a fever diet thirty years ago, and in 1906<sup>14</sup> the same author recommended the gelatin as a diet in ulcer of the stomach, on account of its nutritive value, and also because of its local hemostatic effect. The gelatinous substances, as known, are albumin derivatives. They differ from it in that they contain more N and less C and S. They are easily dissolved and rapidly absorbed. Calves feet, bouillon to which pure gelatin is added in proportion 10 or 20 grams in 200. The Germans have on the market Ewald's ready-made calf-foot jelly, asplik, prepared from calf feet, flavored with lemon-juice or HCl. If some eggs, butter and sugar are given at the same time a satisfactory diet is obtained in the more difficult cases. Senator used this diet in 60 cases of chronic intestinal catarrh with very good results. HCl should be given in considerable quantities, not with a view of compensating the deficiency of this agent, for such enormous quantities can never be administered, but as an excitant to the pancreatic secretion, as Pawlow's experiments and Glaesner's observations have demonstrated.

If corroborative testimony as to the astonishing effects obtained by proper treatment of the stomach upon gastrogenic diarrhea were needed I would quote Shütz. One hundred and three cases were treated this way. All improved. In 85 cases great improvement was noticed after a few days' treatment. The rest improved between two and three weeks, with the entire disappearance of the diarrhea. Only in 18 cases the improvement was slow, but they also eventually yielded to the treatment. The treatment of the cases that are not a result of stomach complications. The first place again is given to the diet. The most reliable guide for the diet is the condition of the stools. Frequent and thorough examination of the stools should, therefore, be made, and that or this article of food that is not assimilated should be withdrawn from the dietary restricted or modified. The unabsorbed food furnishes a residue that irritates the bowels, that is already suffering with hypermotility, and aggravates the symptoms. In catarrh of the small intestine, without impairment of the gastric function, meats, as a rule, do not cause much trouble, and therefore should be allowed. They should be given thoroughly cooked or chopped, free of fascia, tendons and the

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14. Deutsch. med. Wchnschr., Bd. 3.

like. The carbohydrates, on account of the tendency to fermentation, should be given in restricted quantities. All forms of sugar should not be allowed. Vegetables, on account of the large quantities of cellulose, excite peristalsis and should be excluded. Carbohydrates in the form of bread and farinaceous soups are allowed. Toast, zweiback, and the like are given in preference, as these substances contain large quantities of dextrin, which is easily dissolved and readily absorbed. The fats have a disposition to increase peristalsis and should be restricted. The most usable form of fat is sweet butter, 40 or 50 grams at the beginning, and could be increased to much larger quantities when tolerance has been established. Milk, notwithstanding its great value as a food, is usually not suitable in catarrh of the small intestine, as it is liable to undergo fermentation on account of the sugar of milk which it contains. Fruits have an unfavorable effect on account of their principal constituents—sugar, acid, cellulose—and therefore should be eliminated from the dietary for a long time, with the exception of whortleberry. The quantities of food given at a time during the first two or three weeks of the treatment should be small.

*Beverages.*—One or two liters of water should be sufficient for the average person. Bordeaux wine in small quantities could be allowed. Acorn coca, which consists of the purest coca ground up with acorns, is very much recommended by the Germans. Tea, some weak coffee, and cocoa could be allowed. After this period, when a general improvement has taken place, more latitude in the selection of food could be allowed. Vegetables, thoroughly cooked and mashed in the form of purée, occasionally with the addition of small quantities of milk, can be given. But one rule should always be observed—viz., every change of, or addition to, the diet should be a very gradual one. We wait three or four days and watch the results. Some discomfort is not an indication for the elimination of the new article of food added, as this could be overcome by the patient getting accustomed to it. But, on the appearance of a change, either in the frequency or constituents of the stool, a return to the more restricted regime should be made. The hygiene and diet are our principal means by which the restoration of the normal function of the bowel is looked for. Hydrotherapeutic procedures that are of value are not many. During the first period of the treatment, when the patient is kept in bed, warm applications to the abdomen or Preussnitz compresses contribute some comfort. Warm baths, carbonic dioxid baths are of some value.

#### MEDICINAL TREATMENT

These are divided into three groups. First, those that inhibit peristalsis; second, those that have an astringent effect, and, third, those that have an antiseptic and anti fermentative effect. To the first group belong the opiates. Hemmeter registers his vehement protest against their frequent and indiscriminate use. A different point of view could hardly be taken. The disease that we have to deal with is a chronic one. The effect of this drug is not permanent, and what, worst of all, is

that the habit could be easily acquired. It should be used after every other method fails, and that not to be continued very long at a time. Sleeplessness could be combated with veronal and other drugs having a similar effect. Nervousness by bromids, valerianates, etc.

To the second group belong the tannic acid preparations and bismuth. The first is known as combining with proteids and thus produce a peculiar effect upon the mucous membrane called astringent. The tannic acid should not be given, as it will this way disturb digestion, and by the time it reaches the bowel is ineffective. Preparations that are not soluble in the stomach, but dissolve under the influence of the alkaline secretions in the bowels, should be preferably given, tanningen, tannocol, tanopin, etc. Rosenheim prefers the tannocol; half a teaspoonful two or three times a day. The subnitrate of bismuth is not soluble and is, therefore, inactive. Small quantities are dissolved by the gastric juice and then act as an astringent and disinfectant. A mixture of equal parts of subnitrate of bismuth and calcium phosphate with some belladonna is recommended by Rosenheim. Subnitrate of bismuth, calcium phosphate, and carbonate and resorcin is recommended by Aldor. Silver nitrate, two to three decigrams to a hundred, half a tablespoonful three times a day, is sometimes used. However, it irritates the mucous membrane and impairs the appetite. Among the disinfectants are salol, salacetol, fortoin (the real name of it is formaldehyde kotoin) benzonaphthol. Their value, however, is questionable. Hemmeter's experiments on dogs, the colon of which was connected with the external abdominal surface by an artificial anus and the entire colon washed with antiseptic solutions, have demonstrated that it was impossible to sterilize the mucosa of the colon. Experimentation with sterile food has given no reliable diminution in the number of intestinal bacteria. Calomel that has been considered as having a disinfectant effect upon the intestinal contents has been shown by Schmidt to actually increase the number of bacteria in the feces. Aldor<sup>15</sup> confirms this observation. When we succeed by our treatment in improving the patient's condition, both in the subjective symptoms as well as in the bowel movements, the medicinal treatment should be gradually discontinued. If constipation follows it should not be combated by sudden changes in the diet; for instance, by the addition of coarse vegetables and fruit; but should be treated by other means—viz., massage, gymnastics, increased body activity, enemata of water or cammomile infusions. The treatment by mineral waters in appropriate places is accessible only to the great minority of patients and can usually be dispensed with. Many German authors, however, are of the opinion that certain mineral spring waters actually exert a curative influence on the anatomical process of chronic enteritis. In this country the mild bitter waters of the magnesia spring at Bedford Springs, Pennsylvania, and the Saratoga springs, which contain magnesium and calcium carbonate and sodium chlorid, are of the

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15. Deutsch. med. Wchnschr., Bd. 2, 1908.



same value as the German waters. There is a spring at Hot Springs, Va., that furnishes warm magnesia water and which Hemmeter very enthusiastically recommends.

In the treatment of diffuse catarrh of the bowels the same dietetic and hygienic measures recommended in catarrh of the small intestines are used. As this form of the disease is a very obstinate one, all measures have to be used with great energy and perseverance. For the severe diarrhea absolute rest, warm applications to the abdomen, are of great help. It is even advisable in the very severe cases to restrict the daily quantity of liquid to 500 c.c. If constipation follows it should be combated neither by cathartics nor by sudden changes in diet, but by bowel irrigations with normal salt solution. In order to reach the colon as high as possible the patient is put in the knee chest position during irrigation. On the other hand, the uncontrollable diarrhea is treated by irrigation with warm water, to which certain medicaments that are known to exert beneficial influence upon the mucous membrane are added. Tannic acid,  $\frac{1}{2}$  to 1 per cent.; silver nitrate solution, 1 to 1,000. The bowel is thoroughly washed out with warm water in order to remove the accumulated fecal masses. About 500 c.c. of the above named solution is injected into the colon. The patient then is instructed to change his position from right to left and on his back a number of times during the few minutes; the fluid is then allowed to escape through the tube, and another quantity is then again injected and kept in a few minutes longer. A good many cases are greatly benefited by systematic irrigation of the colon with large quantities of salt solution at the temperature of about 105 F., about 10 liters of this fluid being used at a time; a small quantity left in the colon to be absorbed. There are very severe cases in which fats and proteids are very badly tolerated. We must then give these food materials in restricted quantities, say, between 50 and 60 grams pro die, or a pure carbohydrate diet has to be tried. Farinaceous soups, sago, rice, barley, well cooked, and some milk added. In the severest cases, where even this diet causes abdominal distention and painful peristaltic unrest, codein and opium have to be used. As soon as some improvement takes place the diet is varied by the addition of toast, eggs, and butter, and vegetables in purée form. Occasionally we make use of the artificial foods, hygiama, nutrosc, plasmon and the like. For the severe anemias that follow the diffuse catarrh we give iron, arsenic as Fowler's solution, or cacodylate of sodium, 5 cg. to 1 dg. per dose. Special attention must be given in these cases to the condition of the appendix. It is easy to understand how this organ might be involved whenever the cecum is diseased. So that whenever symptoms pointing to involvement of the appendix, i. e., tenderness in McBurney's point, vomiting, enterospasm, and especially leucoevytosis, surgical aid should be looked for.

For the treatment of colitis we endeavor to choose a diet that results in the formation of feces that are soft, that do not contain much material that is easily decomposed by microorganisms and free from material that irritates the mucous membrane of the colon, but yet passes

through it without any difficulty. In other words, the dejecta must contain large quantities of fat and water. To increase the fatty constituents of the stool we give the patient butter, about 4 oz. per day, cream and olive oil, the latter if tolerated by the stomach. The water constituents of the stool can not be increased by abundant drinking, as this is absorbed in the upper segment of the small intestine and eliminated by the kidneys, but we give the patient such food that contain large quantities of water that are not easily dissolved in the stomach and small intestines and enter the colon without losing the watery constituents. This is supplied by fruit and vegetables. It is, of course, necessary to see that this should be given well cooked and mashed, and also free of peels, seeds, stones, etc. Proteids should be restricted on account of the ease with which they undergo putrefaction in a diseased bowel. The small quantities of meat that are allowed should be free of fibrous and connective tissue as much as possible. Smoked meats should not be allowed. Bread, toast and zweiback are allowed. The quantity of carbohydrates given to the patient depends upon the condition of his general body nutrition. In the obese only small quantities are allowed. In the emaciated persons, on the other hand, plenty of carbohydrates and fats are given.

*Beverages.*—Some milk, tea, weak coffee, red wine, small quantities of lemonade, can be given. Rest and warmth is of great usefulness, as in the affection of the other segments of the intestinal tract. If the tendency to constipation is not overcome by the dietetic measures local treatment has to be resorted to, and the best are oil, enemata, sesame, poppyseed, or olive oil can be used. At bed time between 100 and 250 c.c. of warm oil is injected, the patient remaining in bed with elevated pelvis and retaining it as long as possible. Many of my patients retain it without any discomfort over night. In the morning, or three or four hours after the injection, if the patient is unable to retain it over night, there is usually a satisfactory evacuation of the bowel. If not, then the patient receives an irrigation with about a liter or two of warm, normal salt solution. In most of the cases this procedure is sufficient to bring about a good bowel movement. And if this is patiently carried out the normal bowel function is sooner or later restored. Occasionally some mild laxative like cascara, rhubarb and phenolphthalein has to be given and can be given without causing harm. In the very obstinate constipation copious irrigation of the colon with hot, normal solution from 5 to 10 liters is of great help. Bitter mineral water is given. This should be used in small quantities during the day to avoid over-irritation of the bowel. They induce transudation into the lumen of the bowel, liquefying thereby the feces and, at the same time, increasing peristalsis. Galvanism with one electrode in the rectum or massage is occasionally resorted to with good results.

In that form of colitis that distinguishes itself by its extreme irritability, severe pain and very troublesome diarrhea, alternating with constipation, the situation is most embarrassing and trying to the physician. In these cases, along with the abundant secretion of mucus, there is

a considerable admixture of blood in the feces. The endoscope then shows very much congested mucous membrane ulceration, polypus proliferation and infiltration of the submucosa. Even in those cases where the inflammation is confined to a part of the colon—for instance, the sigmoid flexure—the diarrhea is profuse, and occasionally uncontrollable, on account of the great irritability of the organ and the very much increased transudation into the lumen of the bowel. The general condition of the patient suffers immensely. There are even exacerbations, accompanied by fever.

The diet that is suitable in colon affections must be used with great caution and moderation; compotes and all vegetables have to be stricken off the diet list. Fish and meat should be given either in small quantities or must be completely withheld for a time at least. Rice, sago, barley, tapioca, butter and white bread with some milk must be the chief articles of diet. In exceptional cases a strict milk diet or kefir bring about improvement. Rest is unavoidable. The medicaments that allay irritation and recommended above are also useful here. To these belong the tannic acid combinations, calcium preparations, and opium. The last named, of course, should be used as a last resort, but, nevertheless, can not in some cases be dispensed with. Local applications of bismuth, where there is great irritability of the colon with a tendency to hemorrhages, are of great value. Between one and two teaspoonfuls of subnitrate of bismuth is thoroughly stirred in water; a soft rectal tube is passed as high as possible in the colon; the mixture is poured in through a funnel, and, after a few minutes, the funnel is lowered, the water allowed to escape, the bismuth remaining in the colon, causing a coating over of the mucous membrane. Although this form of colitis is very difficult to handle and lasts months, or even years, yet sooner or later we succeed by the remedies at the command of the internist to become master of the situation, at least as far as making the patient's condition tolerable is concerned. In only exceptional cases, usually complicated by ulceration, does it happen that the disease remains uninfluenced by our treatment and surgery has to be resorted to. An operation by which an artificial anus is made, usually in the cecum, affording thereby perfect rest to the diseased part, and, at the same time, by systematic irrigation *restitutio ad integrum*, can be brought about and the fistula then closed.

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## A MODERN METHOD OF TREATMENT OF TYPHOID FEVER.\*

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In taking the time of this society for discussion of this subject, it almost seems, in view of the great amount of literature that appears each year on the subject, that I owe you an apology. My excuse is the preva-

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lence of this infection, there occurring in the United States annually between 300,000 and 350,000 cases, with a mortality averaging at least 10 per cent. That is to say, between 3,000 and 3,500 deaths occur each year in this country from this disease. As these cases occur mostly in young adults, economically the most valuable portion of the population, the loss is proportionately serious. Further, a disease that has a mortality rate of 10 per cent. certainly merits continued discussion until that mortality rate is reduced. Musser, in his "Medical Diagnosis," makes the statement that typhoid fever is the most important infection of the temperate zone; with the single exception of tuberculosis I agree with him.

As the title of this paper indicates, I will take up the treatment and management of a case of this infection and shall only refer to the symptoms as seems necessary in elucidation of their control. A few generalizations on the whole series of infections and certain manifestations present and common to all of them will be considered before passing to this individual infection.

When an individual has been attacked by pathogenic bacteria and the toxin peculiar to that bacteria has obtained access to the general circulation, probably the most constant objective symptom is a rise of temperature on the part of the individual attacked: this is known as fever. This fever has always been considered a part and appanage of the disease and, of course, as such it became the duty of the physician to combat it at all hazards. This idea was the cause of the use of a long list of drugs known as antipyretics. The most perfect and efficient antipyretics known to the medical profession are probably the coal tar derivatives. It is possible with these remedies to reduce the fever present in almost any infection. The temperature may be brought down to normal, or even below normal, in a few hours. This was thought at first to be a great discovery and a perfect weapon in combating disease, but the large and increased mortality of all infections treated with these efficient antipyretics soon disabused the minds of medical men in regard to their beneficent rôle.

The use of coal tar derivatives in infections was condemned because it was believed they had a dangerously depressing action on the heart muscle, and also that they disorganized the red blood corpuscles. This has never been demonstrated and is, I believe, not true. The disastrous results of medicinal antipyretics led to the promulgation and speedy acceptance of the "Brand Method" of treatment in the infection under discussion. This method is essentially an antipyretic idea and founded on the assumption that fever is a part of the disease and should be lessened if possible. This treatment does not, I believe, materially lower the mortality rate, and, while it lessens the toxemia, does not tend to decrease either the number or gravity of the complications.

Anent the subject of fever, I quote Bunge in *Physiologic and Pathologic Chemistry*, 1902, Second Edition, pages 420 and 421. He says: "Almost all forms of infection lead to the complex of symptoms which we term fever. Of these symptoms the rise of temperature is, as we



know, the most readily measured, and has, therefore, been the subject of the most thorough investigation."

Teleologically this rise of temperature may be explained on the assumption that by its means the pathogenic micro-organisms are killed, or at least arrested in their development, and their pathogenic properties weakened. In support of this view of fever he quotes many writers of standing, including Pasteur and Koch. Bunge says further: "The rise of temperature in fever would therefore be one of the processes of self-protection and self-regulation, of which we have so many examples in the body." And, further, in a footnote, he gives as a conclusion deduced from these facts. He says: "If this interpretation of the significance of fever be correct the treatment of febrile disorders by means of cold baths and antipyretic remedies would appear to be a bad one."

Let us now consider fever on the assumption that it is a physiological effort and valuable asset, instead of a pathologic stigma, and how quickly our conclusions get a firm footing and lead us to rational acting. Self-defense is the first law of Nature, and only in the name of this sacred law does she ever draw that bright and flaming weapon that we have learned long ago to call fever, but have been so slow to understand its true significance. The physician can surely occupy himself with something better than attempts at dulling this weapon of defense.

The picture of a case of typhoid infection by the time we are able to make a diagnosis is pre-eminently a picture of toxemia. The trembling tongue, the slow cerebration, the diarrhea with anorexia and insomnia, all point to profound intoxication. We now know that this toxemia arises from the toxins given off by the disintegrating bacilli and that the living bacilli probably take little part in this phase of the disease. Another evidence of toxemia is the lessened coagulability of the blood manifest by epistaxis. Now, what effort is the attacked organism making to combat this state of affairs—only one that we have certain knowledge of that is with a rise of temperature? The one exception to this is the ambulant case that has little or no rise of temperature and it has a deservedly bad prognosis.

What can the physician do that will accrue to the benefit of a case of this description when it confronts him? I will attempt to state the terms of the problem. An individual has become infected with a certain pathogenic bacteria known as the bacillus typhosis. If the individual lives he will have established his immunity to that particular bacterium in from three to five weeks' time. The physician at the present time possesses no drug or combination of drugs capable of either destroying the bacteria or of hastening the immunization process. And a doctor who claims to "cure" a case of typhoid fever must of necessity accomplish one or the other of these two things.

In consulting current literature preparatory to writing this paper I was struck with one phase of the subject, that, while writers disagreed completely on every other item in treatment of typhoid fever, they were practically unanimous on the idea of the necessity of devising some means of reducing the temperature. And not a single writer suggested

a plan for lessening the toxemia which is evident and capable of demonstration, the sole cause of the attacked individuals' rise of temperature.

The treatment that I have originated, and to which I wish to call your attention today, is founded on the idea of controlling the toxemia and letting the temperature take care of itself. As I am convinced that no patient has ever achieved immunity without a marked rise of temperature, and as I am certain that fever is a physiological process pertaining to the patient and not to the disease, I firmly abstain from attempted regulation of it.

This method of treatment originated in an attempt to use the Brand treatment. In 1894 I became convinced of the benefits of this treatment and endeavored to adapt it to the exigencies of private practice. As very few of my typhoid cases had bath facilities, I resorted to bath towels saturated in water corresponding to the temperature of the patient; that is, the higher the temperature, the lower that of the water. One of the first effects that I noted in this plan of treatment was a very marked lessening of toxemia present. The delirium cleared up, or, if the treatment was begun early enough, it often did not appear at all. There was much less trouble with diarrhea and tympanites. The patient slept better and digested his food better. I believed that this all came from the antipyretic effects of the baths, although this effect seemed small and the good results seemed out of proportion to the insignificant lowering of the temperature produced by these towel baths. Then a series of cases occurring in children and women came under my care who positively refused to submit to the cold towelings and I compromised by giving warmer baths, but oftener, to make up for the deficiency of the antipyretic element of the treatment. To my great surprise these patients did much better than those who had received the ice water towelings. After some experimenting I formulated a method of treatment that first included the water supply necessary; second, a regular elimination of toxins, and, third, the food supply, these three being to my mind the fundamentals of successful treatment of the subject of typhoid infection during the period of immunization through which he must pass before regaining the normal.

The method is briefly this: As soon as a diagnosis is made with reasonable certainty a calomel purge is given at bed time, followed with a saline next morning, not with the idea of modifying the infection, but for the purpose of clearing out the intestinal tract of particles of undigested and fermented food, for the reason that most of these cases eat food that they can not digest during the prodromal period of the disease.

The baths are now instituted at once without reference to the temperature. The first bath is given at 7 a. m. and followed regularly every two hours during the day until 9 p. m., unless the patient be restless, when the last bath is given at 11 p. m. Immediately preceding each bath the patient is required to drink from four to eight ounces of water, and immediately after each bath he is required to sip slowly from two to six ounces of milk, depending largely on the appetite of the patient as a guide to the amount taken.

The technique of the bath is as follows: One-half of the bed is covered with any material (an ordinary quilt folded once answers the purpose perfectly), the patient's gown is removed, and he is asked to roll on the covered portion of the bed. Then two large bath towels are saturated in a bowl of water of the required temperature, the patient is told to extend the arms parallel with the body and the anterior surface of the body is covered with the towels that have been slightly squeezed—not wrung—when taken from the bowl. The towels are allowed to remain for three minutes, when they are removed, rewet, and the process is repeated on the posterior surface of the body. The patient's body should be entirely covered from head to heel, the towels overlapping somewhat in the middle of the body. The whole process, including time spent in giving water before the bath and milk afterward, should occupy about twelve minutes. If the patient complains of chilliness following the bath he may have a hot water bottle and some extra cover for fifteen or twenty minutes, and if the chilliness is not relieved in this time it is best to raise the temperature of the water used in the bath.

These baths should be continued in this manner and time until the patient seems on the point of achieving his immunity as evidenced by a marked fall in temperature, an ability to take solid food, the occurrence of a formed fecal movement, a normal tongue, etc. Then they should be given every three hours, and after the temperature has been normal in the evening for two or three days they may be discontinued unless the disease should later show signs of recrudescence, when they should promptly be again instituted.

Contraindications: The only contraindication I have recognized is the occurrence of severe intestinal hemorrhage. The baths should then be stopped for a few hours until it appears that the hemorrhage is controlled, when they should be resumed. Temperature of bath for a robust adult should be about 60 F. and for most women and all children 20 to 30 degrees higher. When the reaction is delayed more than ten minutes it is too cold and the temperature should be raised.

#### ADVANTAGES OF THIS SYSTEM OF BATHING.

They are as practicable in the humblest home and as readily given there as in the best appointed hospital. They do not require the ministrations of a trained nurse. Any fairly intelligent woman can learn the method in fifteen minutes, and a little criticism on the part of the attending physician will render her work perfect in the first few days of the case. This contrasts strongly with the Brand system, the appointments for which were scarcely obtainable outside of a hospital. And really less than one-half of 1 per cent. of the cases ever received this treatment on account of lack of facilities.

#### PURPOSE AND EFFECT OF THESE BATHS.

The purpose of this bath is the elimination of the typhoid toxin; therefore they are given persistently and regularly in the morning hours, when the temperature is low, as they are given in the evening, when the

temperature is high. There is every reason for believing that as great a quantity of toxins are being added to the circulating medium during the morning hours as during the afternoon period of high temperature. What is erroneously called the typhoid curve of temperature is merely the diurnal ebb and flow of the patient's vitality, always present alike in disease and in health.

These baths have little or no immediate effect on the temperature. They are limited to three minutes, so that it will be certain that they do not interfere with the efforts of the patient to attain his immunity. But there is every clinical evidence in proof of the claim that they do eliminate the typhoid toxins. A patient who receives these baths regularly from the time of diagnosis will not develop the typhoid state. He will have no troublesome diarrhea, he will have no delirium, he will have no insomnia, but will sleep soundly through the night and, indeed, during a great part of the day. I always leave orders that the patient must have his bath on time, even if it be necessary to awake him, because I am certain he will have no trouble in getting all the sleep he needs. The question may be asked through what organ do these baths cause elimination of the toxins? I believe through the skin, because the skin remains moist and soft during the height of the temperature, and after they are given for four or five days a very marked typhoid odor is given off, plainly referable to the skin. Also in about 25 per cent. of the cases that have come under my observation, about the middle of the third week, the patient has three or four very free sweats, and after these immunization may be considered to be an accomplished fact.

These baths shorten the period of immunization to three weeks or less in the great majority of cases, but do not in my opinion lessen the tendency to loss of immunity, or what is generally termed a relapse. If this occurs the baths should be promptly resumed, and this usually runs an exceedingly short and mild course. The only drug that is given is arsenite of copper, gr. 1/100, dissolved in one-half glass of water, four times a day. This is given for the purpose of precipitating the toxin that may be in the intestinal canal. As we know, large numbers of disintegrating bacilli are in the intestinal canal, and as the disintegrating bacilli are the sole source of toxin, and, as this toxin while in solution is subject to absorption, the copper is given on the theoretical assumption that it will prevent this absorption by throwing the toxins out of solution. Alcohol should not be given, either as a food or medicine, as it interferes with the physiological activities of the phagocyte, the most important element in the immunization process.

#### COMPLICATIONS.

Hemorrhage due to the lessened coagulability of the blood as a result of the presence of the toxin in the circulating medium is sometimes a matter of grave concern. In the series of cases treated by this method no serious hemorrhage has occurred due, I am confident, to the lessened degree of toxemia attained. Theoretically the citrates should not be



given during the first two weeks of the attack, as they lessen coagulability of the blood. This prohibition would apply to lemonade, which has been allowed by most physicians.

#### PERFORATION.

If this takes place a surgical treatment is, of course, in order. And when this is done the physician will have the satisfaction of turning over to the surgeon a patient with a clear mind and a heart whose muscle is not demoralized with long sleeping in toxin, a patient in whom he has every reason to look forward to a happy conclusion.

#### DIET.

Milk ranks first and should always have precedence of other foods. The method of giving this milk immediately after each bath has given me excellent results. If the milk disagrees lessen the amount and insist that this be slowly sipped. If this disagrees substitute buttermilk. The poorest food that can be given is "drug store foods." If the patient, after the second week, wants solid food, give it to him in the form of bread and butter. Bread and butter is a model food in typhoid when they are able to take it. When a patient is able to masticate and swallow dry bread and butter there will be no doubt about his ability to digest it. A grave mistake is made in giving some solution or semi-solution of starchy foods. A patient who has not enough saliva in the mouth to moisten and swallow the starchy food can not digest it after getting it into the stomach and it becomes a menace to the case. Milk toast, crackers broken in milk or soup, and breakfast food should all be interdicted, for the reason that it is impossible for the physician to know when they can be digested. Broiled beefsteak and soft boiled eggs and baked potatoes, each in small quantities, may be allowed during the third and fourth weeks. A patient who has a normal sensorium and who has had sufficient sleep may certainly be allowed a more generous dietary than one who is in the low muttering typhoid delirium, picking at the bedclothes, etc., or who has been keeping a vigil for twenty-four or forty-eight hours. Pawlow, by his interesting and scientific investigation, has demonstrated how important it is that the mind should assist in the delicate processes of digestion and assimilation. This should always be taken into account in arranging the dietary of every patient. I believe the majority of patients are fed too much the first week, as their powers of assimilation at this time is at its lowest. Some fruit juices should be allowed, avoiding the citrus fruits during the early stage of the disease.

#### MANAGEMENT.

Patient should be instructed to wash the mouth and teeth two or three times a day with a mild alkaline solution. I use a Carl Seiler tablet dissolved in one-half glass warm water. No active antiseptic should be used in mouth, as it favors the development of various pathogenic bacteria. A trained nurse is a convenience to the doctor but not a

necessity to the patient. Indeed there are some advantages in having some member of the family, preferably a woman, take charge of the patient. A woman who nurses a patient of this kind under the eye of an intelligent physician will ever after know how to avoid infection herself, and also how to protect those placed under her care. In other words, she will become a sort of sanitary outpost in the great battle of prevention that is now being waged with varying fortune against this disease. I will not go into the subject of protecting the family and community from contagion further than to say it is the physician's duty to see that all excreta from the patient, urine, feces and sputa should pass through a solution of 1 to 1000 of mercury bichlorid and the nurse instructed to carefully scrub the hands after touching the patient.

I have abstained from quoting authorities in writing this paper for the reason that the premises on which the treatment is founded are no longer subjects for argument. I could not quote authorities of the treatment itself because, to the best of my knowledge and belief, it is original.

Now, do results justify this method? During the period from 1898 up to the present time 97 cases of typhoid have come under my care. During these eleven years I have been using this method I have had complete absence of mortality.

This experience extends over such a long period of time it must of necessity have included cases of almost every degree of virulence, and I believe the merits of any method of treatment must be judged by a time test as extensive as this one. We all see epidemics of this infection so mild that they practically all get well, no matter what the treatment, and again an epidemic so virulent that the mortality is as high as 40 per cent. to 50 per cent. These facts have been borne in mind, and after eleven years' experience with the method that I have placed before you today I firmly believe that I am justified in making the claim that this is *the* treatment for typhoid fever. First, because it is founded on physiological principles capable of demonstration; second, because it is practicable with all cases and under all circumstances, and, third, because results are all that could be desired.

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## SOME LESSONS IN TONSIL SURGERY.

CHARLES B. YOUNGER, M.D.

CHICAGO.

A study of approximately 1,100 cases of tonsils in the clinics of Northwestern University Medical School covering a period of six years leads to the following conclusions from a strictly surgical viewpoint:

1. That a tonsil demanding removal on account of actual disease should be as thoroughly removed as the exigencies will permit, it having been demonstrated that a diseased tonsil is in most instances diseased throughout its entire substance.

2. That a tonsil in which inflammation has not been known to exist, but which is an obstruction to speech, deglutition or respiration through purely mechanical causes, may justify excision, but does not demand radical removal.

3. That removal of portions of the pillars of the fauces as an adjunct to the tonsil operation should be practiced only in carefully selected cases.

4. That in those cases where inflammatory adhesions bind the pillars to the tonsil, or in those cases of submerged tonsil requiring enucleation, blunt separation of adhesions is preferable to any cutting manipulation.

5. That in some instances of persistent bleeding after removal of tonsils the bleeding point is found on the inner surface of a pillar rather than at the immediate tonsil base, emphasizing the need of care in separating pillars from tonsils, and the avoidance of an unnecessary cut into the pillars.

6. That in case of excessive or prolonged bleeding, regardless of the operative method employed, the most reliable and readily applicable means of controlling the same is continued pressure.

7. That in the removal of tonsils the chief precaution should be the avoidance of persistent bleeding or secondary hemorrhage, and therefore the method which in the given case will accomplish the result with the least traumatism is to be favored.

8. That, owing to the large variety of conditions presented, there is no individual method, and, more particularly, no one tonsil instrument now in use, that will properly and adequately fulfill all the requirements under all circumstances. A variety of instruments should be at hand to meet any contingency.

9. That the gravity of the tonsil operation should not be underestimated. It is properly a hospital operation and should not be undertaken without careful preparations.

10. For general anesthesia, ether; for local anesthesia, cocain.

#### CLASSIFICATION.

The morphology of the tonsil or the indications for its removal are not within the scope of this paper, the observations herein set forth bearing only upon the surgical procedures. From the surgeon's standpoint the great variety of tonsils presented for removal may be broadly classified as follows:

1. Well defined tonsil with pedicled attachment.
2. Well defined tonsil with broad attachment.
3. Submerged tonsil.
4. Any tonsil bound by adhesions.

This classification may apply alike to children and adults, the most important distinction being that the tonsil of childhood has a preponderance of soft lymphoid tissue with elastic vessel walls, while in the older subject there is a preponderance of fibrous connective tissue with inelastic vessel walls. This has some bearing upon the method to be

employed. Inasmuch as the great majority of cases presented for operation are under fifteen years of age, it may be well to outline as nearly as possible a method of procedure suitable to that great class.

#### PRECAUTIONS.

1. Avoid operating upon tonsils acutely inflamed, owing to the greater predisposition to hemorrhage.
2. Shun cases that reveal the status lymphaticus or give a history of hemophilia.
3. Do not operate during the menstrual period.
4. Calcium chlorid may be given for a week preceding operation to minimize bleeding.

#### PREPARATIONS.

1. Careful examination of lungs, heart and urine is imperative. Why?

(a) A mild bronchial inflammation may predispose to an inspiration pneumonia.

(b) Grave heart lesions, not uncommon in children, may contraindicate anesthesia or contraindicate the shock attendant upon operating without anesthesia.

(c) Case recently reported in which child died from diabetes within a few hours after removal of tonsils. Previous examination of urine had not been made.

2. Give cathartic the night before operating, followed by an enema in the morning, if necessary.

3. Patient should be absolutely deprived of food for at least six hours before operating. Water may be given sparingly, but no milk. Milk curds regurgitated into the throat are extremely annoying and peculiarly dangerous to the patient.

4. Patient clothed in gown only to insure perfect respiratory freedom.

5. Application of principles of asepsis.

#### ANESTHETIC.

General.—In these cases we are constantly beset by two momentous factors peculiar to throat surgery—viz. (1). respiratory difficulties: (2) status lymphaticus. Ether, chloroform, nitrous oxid, ethyl chlorid and somnoform all have their earnest advocates, but the preponderance of opinion is in favor of ether as the safest under all conditions. It has some objectionable features, but these are of minor consequence when the one great consideration should be the safety of the patient. Certainly chloroform should not be used, and the warfare against it during recent years has almost relegated it to obscurity so far as this operation is concerned. Some serious cases of depression have followed the use of somnoform and its use has been almost discarded. Some years ago, when tonsillotomy was in vogue and speed counted for more than clean results, nitrous oxid gas was found a convenient if not an



altogether safe means of anesthesia. More recently it has been employed in connection with ether, but any presumed advantages that it may have over the use of ether alone are not sufficient to commend it, except, perhaps, in the hands of an expert anesthetist, and even then it may well be dispensed with. Nitrous oxid asphyxiates rather than anesthetizes, and, considering our two great dangers mentioned above, its unsuitability in these cases is plainly apparent. The hypodermic injection of morphin to children prior to operating, as advocated by one essayist at the 1908 meeting of the American Medical Association, seems unnecessary and ill-advised. In support of our recommendation of the straight ether anesthetic it may be said that of the many hundreds of cases that form the basis of this paper and where ether alone was used there was not a single untoward result. The adult cases that require general anesthesia are very few and limited almost to extremely nervous individuals.

Local.—For local anesthesia cocain continues to hold first place. It may be used in solution varying in strength from 10 to 20 per cent. and applied on a cotton swab to the entire tonsillar surface, the anterior and posterior pillars, the uvula and pharyngeal wall, followed by the application of 1 to 1,000 adrenalin over the same surfaces. A 1 per cent. solution may be injected into the tonsil substance by means of a long curved needle. Whenever cocain is used it should be borne in mind that some persons have a decided idiosyncrasy to the drug and others have heart lesions of more or less gravity and too much caution can not be exercised. About 20 minutes is required to obtain the full anesthetic effect. The chief objection raised to the injection of cocain into the tonsil is that extensive sloughing sometimes follows. Another objection is the added danger of absorption. However true this may be, it is certain that the solution can not be so readily introduced throughout the tonsil substance as it can under the skin, and, furthermore, it can not be accomplished without considerable pain to the patient. Sterile ice water introduced in the same way will give just as satisfactory anesthesia, but these procedures in themselves often cause the patient more distress than that attendant upon the actual removal of the tonsil.

#### METHOD OF ANESTHESIA.

1. Anesthetic should be in experienced hands, leaving the surgeon to his own duties.
2. Patient put to sleep in recumbent position. The head may be later raised upon a pillow, turned to the side or slightly lowered, according to the individual preferences of the operator.
3. Ether given by the closed mask method is best adapted to this operation.
4. Inasmuch as these patients breathe with difficulty owing to the obstructive masses of lymphoid tissue, the operator and anesthetist must be constantly on the alert to avoid suffocation or strangulation.
5. Deep narcosis is advised.

## CHOICE OF INSTRUMENTS.

To the uninitiated this phase of the tonsil operation is perhaps the most confusing. For the good and sufficient reason that no instrument can hope to successfully circumvent all the varied tangles that the tonsil presents, the market is flooded with all manner and makes of instruments, varying from tiny scissors more suitable for manicure purposes to guillotines almost ponderous enough to amputate an arm. To reduce the whole subject to a practical working basis, the sole object here is to recommend those instruments which may reasonably be relied upon in the greatest number of cases. So it may suffice to place upon our operating table the following: Mouth gag, tongue depressor, 2 cold wire snares, plain ring tonsillotome, forceps for grasping tonsils, blunt pillar separator, tonsil scissors (right and left), sponge holders, 8-inch artery snaps, abundance of small gauze sponges, suture material and curved needles, tonsil clamp.

Inasmuch as it is apparent that the use of instruments must be suited to the character of tonsil in any given case, let us return to the original classification.

First—The well-defined tonsil with pedicled attachment.—Here the task is comparatively easy to accomplish, and, because the gland is readily accessible, unwarranted liberty is often taken in the choice of instruments. Naturally the patient's welfare should come first in our considerations, so let us choose that instrument or instruments which will quickly and adequately remove the tonsil with the minimum of traumatism and hemorrhage. The observations herein recorded rule decisively in favor of the cold wire snare. It requires no stretching of the imagination to be convinced that less bleeding follows its proper use than where cutting procedures are resorted to. The wire snare is suited only to those cases in which the loop can be readily engaged about the tonsil pedicle, and must be used in conjunction with forceps with which the operator grasps the tonsil and makes traction upon it to facilitate the adjustment of the wire loop. The wire must be securely fastened in the instrument to prevent slipping.

Second—The well-defined tonsil with broad attachment.—While the wire snare might be as desirable here as in the previous case and for the same reasons, it is not so practical. To attempt to engage the wire loop around a broad diameter with the apex of the cone protruding inwardly, must necessarily fail, because the wire simply slips over the surface, leaving the tonsil practically untouched. To effectually use the snare here we must first make slight cuts in the tonsil at the upper and lower angles so that the loop can become engaged. When these preliminary cuts are once made it may be found easier and quite as satisfactory to complete the excision with tonsil scissors or the plain ring tonsillotome. The Casselberry modification of the Mathieu instrument is particularly adaptable, but must be used in connection with forceps which first draw the tonsil well into the ring.

Third—Submerged Tonsil.—There is a class of enlarged tonsils in which there are no adhesions of consequence, but in which the tonsil

is partially and sometimes almost completely occluded from view by an overlapping of the anterior and posterior pillars. Obviously any attempt at removal of such tonsil without first freeing it from its bed must result unsatisfactorily. Either it will be a mere decapitation or the pillars must suffer mutilation in case any considerable portion of the tonsil is obtained. This variety of tonsils requires first that we introduce a blunt separator beneath the pillars and gently enucleate the contents. This can usually be done without any appreciable loss of blood. After this preliminary step we have our choice of the wire snare, tonsillotome or scissors because the tonsil can then be readily engaged.

Fourth—Adherent Tonsil.—Adhesions that bind the tonsil to the faucial pillars must first be dealt with before the tonsil itself can be assailed. Separation of such adhesions is nearly always possible by means of a blunt separator, of which the Yankauer is a good example, and cutting should be done sparingly. First finding the line of demarcation, the point of separator is introduced between tonsil and pillar, and by a sweeping motion is passed entirely around the gland. In obstinate cases the tonsil may first be grasped in forceps and then the surrounding tissues dissected and pushed away until the tonsil is free from attachments. With adhesions once freed the surgeon may choose whatever instruments of those named which seem best adapted to the presenting tonsil.

#### TECHNIC.

Patient lying flat upon back, with head slightly elevated upon a pillow, offers a suitable position and permits of good illumination by means of a 50 or 100 c.p. incandescant lamp used in connection with a head mirror, or an electric head lamp. Direct sunlight is not always obtainable and when it is there is difficulty in getting sufficient of it into the throat. The practice of maintaining the patient in the upright position while under a general anesthetic is not advisable. Some surgeons operate with the patient's head turned to the side, while others favor lowering the child's head, it being claimed that by these maneuvers there is less likelihood of fluids being aspirated into the lungs or swallowed. Preference should be given to that position which offers the best light and facilitates dexterous work. Patient flat on the back with head elevated is not objectionable from the standpoint of safety and facilitates the work of both surgeon and anesthetist.

When the anesthetic has reached the stage of muscular relaxation the mouth gag is inserted on the left side, firmly secured, and entrusted to the anesthetist, who, standing behind, is in the best position to maintain the child's head in the median line and support the gag as well. The proper placing of the gag is essential, for, if the mouth be too widely opened, respiration will be interfered with, and much annoyance may be caused by its constant or inopportune slipping. The tongue depressor when in place is best held by another assistant, who stands on the side of the patient opposite the surgeon. To him may be entrusted the necessary sponging. Such assistance, when skillful, conduces greatly to speedy and effectual work.

The excision of one tonsil completed, it is advisable to quickly turn the child's head sideways and downward so that blood may escape through the mouth. After the excision of the remaining tonsil it is well to turn the child upon its stomach, with head on side and slightly lowered, this position to be maintained until bleeding has ceased completely.

Technic in Adult.—In adult cases operated under local anesthesia the patient may be seated upon a chair or table, according to the best accessibility to light. The tongue depressor, properly placed, may generally be entrusted to the patient. Incidentally, this serves to keep him occupied and in a sense distracts his attention. The choice of instruments will be guided by the classification given above. Owing to the preponderance of fibrous connective tissue in adults it may be stated in a general way that snares and tonsillotomes are perhaps less frequently used than tonsil scissors. The Robertson scissors, used in connection with forceps, are admirably suited to this class of work. Regardless of the type of instrument used, however, the tonsil should first be gently freed from the pillars by blunt dissection. The over-zealous surgeon may be disposed to excise all the tonsil tissue in sight, but it is a point worth remembering that because of the inelastic vessel walls there is a greater predisposition to hemorrhage.

#### AFTER-TREATMENT.

Persistent Bleeding.—Rather profuse bleeding is not unusual immediately following excision of the tonsils, but should cease spontaneously within three minutes. Therefore, it is required that the patient's head should be kept to the side and slightly lowered in order that the surgeon may be sure of absolute hemostasis before the patient leaves the operating table. If bleeding persists the one method certain at all times and under all conditions is direct pressure. If the bleeding is slight it is generally easy to control by introducing a gauze sponge securely fastened to a long-handled gauze holder or 8-inch artery snap and pressing the same firmly into the pocket from which the tonsil was removed. Such pressure maintained for a few minutes will check all minor cases of bleeding. More profuse bleeding that will not submit to such treatment demands greater pressure longer maintained. This is best applied by means of a tonsil clamp, of which there are several makes, but all with the same underlying principle. One arm, protected by a gauze sponge firmly secured, is introduced into the bleeding tonsillar space, while the other arm fits the angle of the jaw externally. A thumb screw makes it possible to exert the pressure necessary to secure absolute hemostasis. The hemostat is generally left in place twelve hours at the least, but pressure must be longer maintained according to the behavior of the individual case. It is possible at times to detect the bleeding point, grasp it with an 8-inch artery snap, ligate, and thus control the bleeding, but such instances are rather exceptional and the treatment uncertain, with the added disadvantage that much blood may be unnecessarily lost while searching for the bleeder. Suturing the pil-



lars in such manner as to close them over the bleeding surface may be of valuable service at times, and may be made more effectual by first introducing a small roll of gauze into the tonsil pocket. Suture and gauze are removed after a safe interval. This method is difficult and not always reliable.

Styptics such as iron, tannin, alum and zinc are absolutely unreliable, besides being extremely obnoxious to the patient. Peroxid of hydrogen as a gargle and small pieces of ice allowed to dissolve in the mouth act satisfactorily at times, but are not to be relied upon. Adrenalin has little effect, and merely transitory at that, upon hemorrhage, once established. In some adult cases it may be found advantageous to give nitroglycerin hypodermically to lower blood pressure, and in case enough blood has been lost to affect the pulse it may be expedient to give normal salt infusions. To resume, it is essential that persistent bleeding be recognized, the earlier the better, as a surgical emergency and approached by the surgeon by the best method at his command to effectually arrest hemorrhage—namely, direct pressure to the bleeding surface. Failing in this, ligate the external (never the common) carotid artery.

Position.—Too much stress can not be laid upon the importance of the patient's position immediately following excision of tonsils under general anesthesia. Briefly, it may be stated that all should be strictly confined to bed for a period of twelve hours or longer and for the first two hours should lie flat upon the stomach with the head turned to the side, without pillow.

1. Should bleeding persist or resume after the operation the blood will run out of the mouth rather than be swallowed. It is highly important that fresh bleeding should be detected at once.

2. This position favors expelling of stomach contents, consisting of dark blood and mucus, swallowed during operation.

3. This position promotes absolute rest.

To illustrate the importance of this posture it may be said that in some cases of continued bleeding after operation and in recurrent bleeding coming under our observation the fact that such bleeding was taking place had not been noted by attendants until the child presented the picture of exsanguination or vomited blood in sufficient quantities to attract attention. Cases thus neglected may become alarming, to say the least, and it is to obviate such a deplorable complication that the flat-on-the-stomach-head-down position should be rigorously insisted upon. A patient permitted to lie upon the back with head raised upon a pillow, or permitted to roll and toss about or sit upright in bed, may do itself immeasurable harm because of the exciting influence upon the circulation and because of the large quantity of blood that may be swallowed before the child becomes quiet from sheer exhaustion.

#### GENERAL TREATMENT.

Little treatment is required subsequent to operation. Rest in bed for a day or two is always advisable. For the first three hours nothing should be given by mouth, but at the expiration of that time, if

there is no active bleeding, cold water, and water only, may be given in tablespoonful doses at hour intervals. Larger quantities of water may excite vomiting and start the throat to bleeding anew. Liquid diet is permitted on the day following operation, and solid food is best withheld for two or three days because of the distress caused in swallowing. Gargles are impractical in small children, but the throat may be sprayed after the second day with a mild antiseptic solution, such as Seiler's or Dobell's, four times diluted with warm water. Adults may use a gargle of Seiler's or Dobell's solution, or peroxid of hydrogen, in one-third strength.

34 Washington Street.

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### "HEALERS'" ADVERTISING CONTRACT CANCELLED.

For several years a certain person named Braun and a woman, probably his wife, have been meandering through the State of Illinois pretending to heal diseases by magnetic healing. Judging from the size of the advertisements that we have seen in various papers of the state, they have done a thriving business. They were driven out of certain communities after their true character became known, but, as there was no concerted opposition to their methods made on the part of the State Board of Health or others, it was easy for them to find new pastures, and no doubt a great deal of money has been collected by them and a great deal of harm done to suffering humanity by their treatment. Strangely enough, they seem to have reached a stopping point through the good sense of the newspaper proprietors themselves, and when they finally reached Springfield *The Evening News* of that city, after having published a number of advertisements preliminary to the advent of the healers, finally published the following explanation which will undoubtedly put them out of business in Sangamon County and should be the means of driving them from the state. Our readers should preserve this clipping, and in case they appear at other points bring it to the attention of the newspaper proprietors and have it published as widely as possible:

"Owing to complaints that have been made to this office regarding the methods practiced by certain 'magnetic healers' known as Profs. Braun, 'himself' and 'herself,' who opened up office rooms at 330 North Fifth Street, Tuesday, *The Springfield News* has cancelled the advertising contract carried with this paper by them.

"The advertising was sent on in advance with cash for its insertion, and the firm appeared to be legitimate. Since the arrival of Profs. Braun here, however, complaints have been made regarding certain things that are alleged concerning them and *The News* decided that the business was not up to the standard which the paper requires as a protection to its readers and cancelled the contract.

"This decision was influenced by certain statements regarding the 'healers' which have come from Peoria and other places where they have operated."

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CARL E. BLACK, JACKSONVILLE.	J. WHITEFIELD SMITH, BLOOMINGTON.
H. C. MITCHELL, CARBONDALE.	J. Q. ROANE, CARLYLE.
M. L. HARRIS, CHICAGO.	J. W. PETTIT, OTTAWA.
J. F. PERCY, GALESBURG.	J. H. STEALY, FREEPORT.
W. K. NEWCOMB, CHAMPAIGN.	

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JUNE, 1909.

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## A COMMENDABLE OFFICIAL ATTITUDE.

The following editorial from the *Bulletin* of the St. Louis (Mo.) Medical Society is of particular interest to members of our society, as it shows that the Governor of Missouri is adopting the identical methods used successfully upon the then Governor of Illinois nine years ago. Had that official been broad enough to grasp the opportunity then offered him he might have still been in official life instead of a political reminiscence.

"The attitude of the Chief Executive of Missouri with respect to the nomination or appointment of physicians to the several state medical bodies or boards has been informally announced to the effect that the organized medical profession will be consulted in such selection, and that the Missouri Medical Association will be asked to designate a number of men fitted by character, capacity and experience to worthily fill such positions, and that ordinarily no such appointments will be made from sources other than lists of names thus recommended.

"It is not the intention to designate any particular man as an obligatory appointee, for that would be invading the prerogative of the Governor, but the reasonable expectation is held out that the appointments

will be made from names presented through the medium indicated—those for whom the profession as organized is willing to be held responsible in so far as character, fitness, etc., is concerned.

“This is an advanced and most encouraging attitude on the part of Governor Hadley, and is in line with what is believed to be statute law in some of the states. In the past, perhaps, much weight has been given to merely partisan considerations, but these should not prevail as against the best interests of the moral, mental and physical defectives who now crowd the institutions and tax the care and forethought of the state government.

“As will be readily seen, the merit of the proposed plan lies in the fact that the appointing power will have a number of qualified men from whom to choose, while the fairness towards physicians appears in the circumstance that they in their organized capacity will be called on to accept a new and important duty, as upon them will be placed the responsibility to carefully see that no unfit man shall be named to the Governor, lest discredit be thereby brought upon the profession through possible bad conduct or misfeasance in office.”

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#### DR. W. G. BAIN IS LOCKED OUT.

After strenuous efforts on the part of Dr. J. A. Egan, Secretary of the Illinois State Board of Health, and a number of his assistants, to oust the state bacteriologist from his position, that official has at last been deposed and a successor appointed to his place at the State House. For some time there had been trouble between Walter G. Bain, the state bacteriologist, and Dr. Egan, and about two weeks ago notice was served upon Bain that his resignation was desired at once. Bain refused to see the matter in the same light as the secretary, and, after considering the situation a few moments, announced that he refused to be fired. The next day saw Bain again at the disputed post of duty, and the decision was then reached in the Secretary's office that other means would be employed to rid the laboratory of the undesirable presence of the chief bacteria examiner.

After Bain had gone home the office was locked and word given to the other employés of the office that Bain was no longer a state employé, and for them not to admit him to the office. The next morning Bain showed up, unlocked the door with a key which he had in his possession, and calmly took his accustomed seat as if nothing at all had transpired out of the ordinary.

New Lock Put on Door.—News that Dr. Bain had again invaded the office and was prepared to transact his regular duties was quickly conveyed to the office of the Secretary and caused deep consternation. Some more effective means must be employed to surmount the persistence of Dr. Bain. A trip was made to a local hardware dealer and a new type of burglar-proof lock was purchased. The desired opportunity soon presented itself. Bain left the office, and during his absence the new lock



was fitted. On his return he surveyed the situation and apparently decided that the best thing to do was to withdraw as gracefully as possible.

Dr. Flint Bondurant, of Northwestern University Medical School, successful in the examination for interne at the Cook County Hospital, and with the degree of A.B. attached to his name, has been named as Bain's successor and has already commenced his new duties.

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## RESOLUTIONS ADOPTED EXPRESSING SENTIMENT FELT FOR DR. GEORGE H. SIMMONS.

### CHICAGO MEDICAL SOCIETY.

*Resolved*, That the Council of the Chicago Medical Society records its confidence in Dr. George H. Simmons; that it expresses its admiration for the man, who, beginning as a sectarian practitioner, has been able to render the distinguished service to the whole medical profession that he has rendered; and that it approves of the spirit of the movements for the advancement of the medical profession which, as editor of *The Journal of the American Medical Association*, he represents.

### THE LINCOLN COUNTY, NEBRASKA, MEDICAL SOCIETY.

At a special meeting of the Lancaster County Medical Society, held April 22, 1909, Dr. Mitchell introduced the following resolutions:

WHEREAS, It has come to the knowledge of the Lancaster County Medical Society, formerly the Lincoln Medical Society, that Dr. George H. Simmons, of Chicago, for many years a member in good standing of this society, is being made the object of an attack affecting his reputation and professional standing while a resident of Lincoln; therefore, be it

*Resolved*, That the members of this society, many of whom were medical practitioners in Lincoln during the time of Dr. Simmons' residence, hereby give expression to the esteem in which Dr. Simmons was held while in Lincoln and hereby acknowledge the valuable service he rendered to the profession here in Lincoln and in Nebraska.

Further, the society is pleased to place itself on record as appreciating the honor conferred on it by Dr. Simmons' distinguished services since his election as general secretary and editor of *The Journal of the American Medical Association*.

And, further, we trust that no action will be taken which will discourage the efforts of a man who has labored so long and so consistently in behalf of medical progress and the development in this country of medical affairs.

The resolutions were unanimously adopted.

The following members of the society were present:

A. R. Mitchell.  
D. C. Hilton.  
M. H. Garten.  
R. J. Haggard.  
M. H. Everett.  
J. M. Mayhew.  
J. T. Hay.  
I. A. McKinnon.

C. W. M. Poynton.  
J. S. Welch.  
G. H. Walker.  
H. J. Lehnhoff.  
H. Everett.  
O. Everett.  
A. D. Wilkinson.  
H. W. Orr.

## THE OMAHA-DOUGLAS COUNTY SOCIETY, APRIL 20, 1909.

WHEREAS, Members of the Omaha Douglas County Medical Society have been reliably informed, that grave charges for alleged unprofessional conduct have been filed with the Chicago Medical Society against Dr. George H. Simmons, who was for many years a resident of the state of Nebraska, a member in good standing and for several years secretary of the Nebraska State Medical Society, that he is the object of a bitter personal attack to destroy his reputation as a man and his professional standing while a resident of our state, and

WHEREAS, We have personal knowledge of his exemplary conduct as a man and a physician since he became a member of the Nebraska State Medical Society, his excellent services as its secretary and his splendid record as editor of the *Western Medical Review*, therefore, be it

*Resolved*, That the members of the society, nearly all of whom recall his excellent services and many knew him personally while he resided in Lincoln, desire to make known their high regard for Dr. Simmons, and bear testimony of the valuable services he rendered to the medical profession of Nebraska; and be it further

*Resolved*, That this society desires to place itself on record, that the election of Dr. Simmons to the secretaryship of the American Medical Association was regarded as a great compliment to him and an honor to the profession of the state; and be it further

*Resolved*, That we hope that the Chicago Medical Society will not entertain the charges preferred; but that he will be commended and not discouraged in the work he has carried on with such distinguished ability, in behalf of the medical profession of our country.

CHARLES ONEDE RICH, Secretary.

EWING BROWN, President.

## NEBRASKA STATE MEDICAL ASSOCIATION.

The following resolutions were adopted by the Nebraska State Medical Association at the annual meeting held at Omaha May 5, 6 and 7, 1909:

*Resolved*, That the Nebraska State Medical Association, through its House of Delegates, desires to place itself on record in opposition to the attack now being made on Dr. George H. Simmons. We believe that the various and illy-disguised interests behind this attack merit the severest criticism for the position they have assumed.

Dr. Simmons was for a number of years a member in good standing and for several years secretary of the Nebraska State Medical Society. He was devoted to our interests, and particularly at the time of his election to the secretaryship of the A. M. A. and as editor of *The Journal* he was held in high esteem.

We believe that Dr. Simmons' record in our own society, and in his present office, entitles him to encouragement and support in this crisis, from the Nebraska State Medical Association, and from all fair-minded physicians everywhere.

(Adopted by unanimous vote.)

A. D. WILKINSON, Secretary.

## MEDICINE AND THE PRESS.

The subject of the presidential address delivered at the Quincy meeting by Dr. Pettit is certainly one on which the medical profession as a whole needs a great deal of instruction. Dr. Pettit has brought this matter squarely to the attention of our membership and, we believe, has established his contention that, in order to bring about many needed reforms, it is absolutely necessary for us to get in touch with the general public through the medium of the press. An article by Professor George W. Crile, of Cleveland, the well-known surgeon, which appears in the *Cleveland Medical Journal* for May, 1909, supplements Dr. Pettit's address so well that we take pleasure in making some quotations from it. Dr. Crile was led to contribute this article because of his experience in connection with a public lecture given by him before a professional organization in Philadelphia. This lecture was first printed in the *New York Journal*. It was then, without Dr. Crile's knowledge, taken up by the *New York Times* and finally published in the *Cleveland Leader*, each transfer after it left the purely medical journal making it more sensational until its final appearance made it a matter of grave concern to the reputation of Dr. Crile. A portion of his paper follows:

"On this occasion I will limit my remarks to two questions: What is the cause of the present unsatisfactory relation between the profession and the press? Can it be remedied?

"Some of the fundamental causes are the following: Medical men of standing have traditionally conducted themselves according to the proposition that their professional work is entirely private and privileged. The invasion of this right by newspaper publicity is universally resented. Is the quest of the newspapers for medical news due to some change in the relation between medicine and the public? Prior to the development of scientific medicine there was scarcely any relation between medicine and the general public. Like the practice of law to-day, the relation was to the individual, but, as the age of empiricism gave way to the age of scientific medicine, medicine, in its growing mastery over diseases, has come almost unexpectedly into the gravest of responsibilities, both private and public. In this rising tide of its efficiency, medicine finds itself wielding a new and mighty power, affecting not alone the ordering of the life of the individual, but much of the conduct of the municipality and the state. It is, for example, making possible a world-wide conquest of the tropics by the white man; its influence upon commerce and industry is large, and it is adding year by year to the expectancy of life. The public has evidenced its appreciation of the work done and its belief in the future by the bestowal of greater authority and larger responsibilities, and by donating annually millions upon millions for the construction and maintenance of hospitals, medical colleges, and research institutions. There is no question as to the general and deep interest of the public in medicine.

"It is obviously absurd to suppose that communication with the press can be severed. Even if it could be, is it desirable to keep all medical

news from the public? The press is, or may be, beyond doubt, the most powerful means of influencing public opinion in the beneficent lines so much desired by all medical men—the teaching of hygiene, public health, sanitation, preventive medicine, and other subjects of general interest and benefit. Why not harness the forces of contention to do the work of useful public enlightenment? From my investigation, I am satisfied that the press would welcome cooperation in professional matters. I believe, indeed, I have been told that the press would be glad of reasonable medical news supervision by a responsible physician or a committee of such—a committee which would pass upon both the contents and the form of all press items affecting our profession, and advise the local dailies as to the probable effects of such ‘news’ on the public and on the profession. Much harm could thereby be prevented and much good could be accomplished. Or would it still be better to have an accredited medical editor attached to each paper?”

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#### THE DAILY PRESS MAKES EDITORIAL COMMENT UPON DR. J. W. PETTIT'S PRESIDENTIAL ADDRESS.

From the *Chicago Evening Post*.

##### LEGITIMATE MEDICAL PUBLICITY.

It is a curious commentary upon the medical profession that a state conference of doctors, such as met at Quincy yesterday, should have called forth a paper like that of Dr. J. W. Pettit's on the obvious relations of the physician and the press.

Traditions die hard and the newer discriminations are slow in forming. Therefore, Dr. Pettit had to go over the twice-told tale of the immense value of the press as an educator and the obligation laid upon the doctors to use it for the benefit not of themselves but of the public.

Let the pioneers keep it up. The country-wide tuberculosis movement has shown the doctors what can be done, within “ethical” limits, in using newspapers for the education of the community. It will probably be found that medicine is not as occult as she has been painted and that proper statements and appeals on other ills than tuberculosis would diffuse greater intelligence among the laity and develop better hygienic habits.

From the *Chicago Record-Herald*.

##### THE PHYSICIAN AND THE PRESS.

In recent medical conferences the need of closer relations between the medical profession and the general public formed one of the leading topics for discussion. The consensus of opinion now is that the era of mystery is past and that the physician should be the public's guide, counselor and friend. Medicine to-day is largely preventive, and the war on contagious diseases is a campaign for education, cleanliness, registration and wide observance of reasonable rules of right living.

This recognition of the need and value of publicity not unnaturally leads to a reconsideration of the “ticklish” question of what is indis-



criminally called "advertising." The old-fashioned idea is that all forms of advertising are prohibited by medical ethics, and that the physician who directly appeals to the public writes himself down as a "commercial" practitioner of low ideals. A candid treatment of the subject, such as is found in the address of Dr. Pettit, president of the Illinois State Medical Society, at the Quincy meeting of that body, shows that the old so-called ethical principles are honored in the breach rather than in the observance. There are many indirect forms of advertising which the profession tolerates and which are really objectionable on the score of good taste. There are forms of direct, honest, truthful advertising which are irrationally tabooed. Common sense, in these days of publicity and the all-powerful popular newspaper, can not but insist on a thorough restudy of the ethics of advertising and on proper distinction between the legitimate use of the press, the dissemination of beneficial information and the abuse of publicity through fraud, exaggeration and flamboyant sensationalism.

There is evidence that the progressive men of the medical profession are clearing their minds of prejudice and cant, and that the relations between the public and the physicians are undergoing a significant change. As Dr. Pettit testifies, more has been done for the anti-consumption crusade through the co-operation of the press than could have been accomplished in fifty years by the unaided efforts of health boards and private practitioners.

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## Correspondence.

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### FURTHER COMMENT ON DR. SIMMONS.

*To the Editor:*—About the attack on Dr. Simmons, the able editor and secretary of the A. M. A., granting for the sake of argument that it were true, would it not be better to say:

If you see a tall fellow ahead of a crowd,  
A leader of men marching fearless and proud,  
And you know of a tale whose mere telling aloud  
Would cause his proud head to in anguish be bowed,

It's a pretty good plan to forget it.

If you know of a skeleton hidden away  
In a closet, and guarded, and kept from the day  
In the dark; and whose showing, whose sudden display  
Would cause grief and sorrow and lifelong dismay.

It's a pretty good plan to forget it.

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CHICAGO, May 19, 1909.

*Editor of the Journal, Springfield, Ill.*

*Dear Sir:*—In the May number of THE JOURNAL I read your editorial notice of the action of the State Federation of Labor in issuing a circular on "Tuberculosis," "The Great White Plague." In view of the

recent interest of the profession in the consideration of certain economic abuses which are present, I think it would be wise to consider certain statements in this circular and ascertain whether it is fair to the profession at large to send broadcast a statement in which trade unionists are informed that they can have samples of sputum examined practically free of cost.

The circular also states that "every practicing physician can also secure from the state, free of cost, antitoxin for use in diphtheria cases. We can also give you valuable information if a member of your union or family is threatened or afflicted with insanity. All this will cost you nothing." I wish especially to call attention to the last sentence.

The Federation evidently does not discriminate between free service for the indigent and the wage earners. The Federation of Labor seems to be willing to accept the services of physicians free of charge, but I wonder if they would be willing to unbend their strict labor laws if physicians desired their services for nothing?

The public seems to take it for granted that the medical profession is not only willing, but anxious to give its services to all who ask them without remuneration.

Yours truly,

JOHN A. ROBISON.

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#### VOTES FOR WOMEN.

*To the Editor:*—In reply to your editorial on female suffrage I would like to express my opinion, being a physician and having thought along this line quite seriously for some time.

First—"Whether the interests of the present and coming generation will be improved by radically changing the privileges of women in connection with affairs of state." "Affairs of state!" That sounds so formidable and grand! But one can not help a small irreverent grin when we think how our grand male representatives and senators have managed affairs of state this last session at Springfield—and the fine skirmish at Washington last winter. What can we expect of our next generation? Suppose the women did get a chance to vote, does anyone think the ship of state could possibly get a little joggle from mere woman after man has floated it along so grandly thus far?

One can not but recall the exclamation of an eastern woman transplanted into Colorado, where women vote, when asked if voting unsexed women. She laughed. "My dear," said she, "no more than education does; nothing can ever make us anything but women." "But," the question was asked, "if women are not changing, what about man?" She sighed. "Dear, dear! His bloom is off; his glamors gone. It's right and just and advanced, I know all that; but alas for the fascinating veil of political mystery in which man once shrouded himself!"

Now we are told when things go wrong that we have just as good government as we want; just as good laws as we are willing to make; just as good men to represent us as we are willing to select; and in the

main that is true if you will say just as good government and laws and men as *one-half* of us select. "Of the people, for the people, by the people" should not be interpreted *male* people only.

Woman is expected to be wise enough to train her son, but *not* wise enough to know as much as he when he is twenty-one years old about whether Mr. John Smith, who lives in her district, is a man smart enough, honest enough, and courageous enough to represent her at Springfield on matters pertaining to the subject of putting five experts in charge of our public charities and corrections, sterilizing habitual criminals, and various other public questions that touch her home circle and the safety of her daughters and herself. It is not reasonable and it is not true. Most American women have as much reason about public affairs as the men of their social circle if they take the pains to look into them.

When no responsibility rests on a class of individuals that class is not usually active in studying the pros and cons of things that they can not enact or defeat. When responsibility rests on women they take up the voting power in just the same way that the average man takes it up, according to whether he is a good or a poor citizen.

Whether voting makes him a better father, a better husband, a better man? Well, you can thrash that out just as well as you can thrash out the question of whether voting will do the same for the women, and the general standard of a community is brought up just as the general standard of the individuals in it is raised.

Second.—There was a question whether the female mind was capable of forming judgment free from prejudice and sympathy. We think she is just as often able to do so as man, if she is placed as man as an independent thinking creature and not encouraged to take a dependent parasite's place. The world suffers an economic loss in just the degree that woman is not encouraged to be a reasonable creature, an active agent instead of a passive one. The traditions of the past bind us and unconsciously guide us, and it has been the way of tradition that woman was the weaker vessel, mentally as well as physically. It costs much in many ways to break away from the common beliefs. We take for granted in our youth what our elders relate to us and much depends upon early impressions, both in man and woman.

It has become the business of many women to seek a husband to support her, not with the open reasonable object of becoming his partner in the struggle for a useful existence; not with the open object of becoming the mother of a fine family of healthy children; not with the object of together accomplishing some splendid scheme of work better accomplished in combination of efforts than alone. And man has too often sought a wife as an accessory to his selfish pleasures, a doll to amuse him in his idle moments, incidentally as a housekeeper and mother, and, when the amusement has worn off, a useful adjunct to his comfort in various ways, but a partner in his thoughts on public affairs, a partner

to his business plans, a partner in his mental life, why, no, he has not found that necessary. He can go to his club, his lodge, his societies, and get all the mental food he wants. Sharpen his wits by tilting a lance with those of his kind, while his wife goes in a little circle of homely cares keeping house if she is domestic, keeping beautiful if she is vain, keeping cradle rocked if she is motherly, keeping the company of servants if they are of average health of society butterflies, if rich or so disposed.

If poor or in moderate means gossiping over the back fence with a shut-in neighbor like herself. Mental food? Well, brains, like muscles, are increased by exercise.

One argument men are prone to put against votes for women is that they are afraid they will not like them so well when they can go to the poles and vote with men; that they will not like a reasonable wife, or, rather, one who has ideas on the tariff and knows what the referendum means! We think those men are being guided by tradition instead of reason; they are like the farmer who gets the old-fashioned wiseacre to treat his sick cattle instead of an up-to-date veterinary because his father did, and believes in "hollow horn" and "wolftail" as real diseases and lets the old wiseacre bore a hole in the poor cow's horn and inject a little cayenne pepper, and split the unoffending tails and tie in a piece of fresh pork with full satisfaction that "everything has been done," whether they die or get well.

Being a physician, I have in my close relation to families noticed quite often a fairly well balanced man with a pretty childish wife. Often and often she has had a prejudiced mind and such a sympathetic temperament that she would feed the baby every time it cried, and being so prejudiced neither her husband nor I could make her see the mistake.

To correct some of these things in our women we must get over the pride we feel in their childishness, and want for them the cultivation of a sense of responsibility in the great affairs of life, of which governing themselves is one, and if those who are reasonable (there are many, we are sure, that can give unprejudiced judgment without any further training) are given their request for the voting power, we believe it will result in much for women as well as for men. The trifling expense of registering and counting their votes ought not to be a heavy tax on the American man, who gives so lavishly to his womenkind for much more senseless things, though just now he is beginning to rebel a little at the Merry Widow hat.

EFFA V. DAVIS.

1033 N. Clark St., Chicago.



## COUNTY AND DISTRICT SOCIETIES

### ADAMS COUNTY.

The regular monthly meeting of the Adams County Branch was held Monday, April 12, in the usual place of meeting. Those present were Dr. Henry Hart, president, and Drs. Pitman, Brenner, Gilliland, Rice, Gabriel, Nickerson, W. W. Williams, Lierle, Koch, Knox, Harrison, Ericson, Johnston, Baker, Montgomery, Christie, Jr., Wessels, Werner, Miller, Haxel, Blickhan, Bearman, Shawgo, J. B. and Kirk, Knapheide, Pfeiffer, Robbins and Wells. Also Drs. J. R. Pennington and Paul Gronnerud, Chicago, and Drs. Earel, Haney and Whipple, Quincy, and Dr. Carl E. Black, Jacksonville. The society had the pleasure of attending a surgical clinic at St. Mary's Hospital in the morning, where Dr. J. R. Pennington operated upon a case of prolapsus recti, and in this case showed the use of the "Pennington plug" or dressing used in hemorrhoidal operations. The physicians present were much interested and profited by this case. The same patient was operated upon by Dr. Gronnerud for the relief of a femoral hernia. In addition, Dr. Gronnerud did a double herniotomy on another patient. It is no disparagement of the work of other surgeons to say that in these difficult and complicated herniæ Dr. Gronnerud did the most beautiful dissections ever seen in a Quincy hospital, and that his exquisite skill and technique were all that could be desired. Adjournment to the Newcomb Hotel was had for luncheon at the noon hour, after which the society met for their business and scientific session. The legislative committee, through its chairman, Dr. Johnston, made report of the work of sending letters to our representatives in protest against Senate Bill 241 and House Bill No. 173. The application of Dr. Wm. J. Earel was read and referred to the censors. Dr. L. Pinekney Peters, of Clayton, was by ballot unanimously elected to membership. A collection amounting to \$15.35 was taken up and ordered sent to the fund for the relief of the widow of the late Major James Carroll. Dr. J. R. Pennington, of Chicago, was then introduced and spoke on "The Anal Canal and Some of Its Diseases."

#### THE ANAL CANAL AND SOME OF ITS DISEASES.

Dr. J. R. Pennington, Chicago:—He said that a good practical working knowledge of the anatomy of the rectum was almost indispensable to one who does rectal surgery. That frequently the lack of this knowledge, by the operator, is probably the cause of post-operative stricture, ulceration, incontinence of feces, failures, etc. The anal canal, he said, extends from the ampulla or the upper border of the levator ani muscle to the anus, and is divided by the linea dentata of Stroud into two parts. The proximal portion of the canal is lined by mucous membrane and the distal by squamous epithelium. The pectinate line is an irregular line and has been so-called because of its resemblance to a comb. It seems to be the point of junction between the hindgut and proctodeum. Above this line the mucous membrane is thrown into longitudinal folds, and these folds are called the columns of Morgagni. Below it the skin is thrown into similar folds. These folds permit of dilatation of the canal during defecation. Between the columns of Morgagni little pouches or sinuses are frequently seen. They are known as the sinuses of Morgagni.

Ischio rectal abscesses in the majority of cases are probably due to injury or ulceration occurring primarily in the anal canal. The location of such ulceration or injury being at the pectinate line in one of the sinuses of Morgagni. Suppuration, once started here, tends to make its way through the rectal tunics between the two sphincters into the ischio-rectal fossa. It is also true that some cases of ischio-rectal abscesses originate outside the rectum or in the fossa pri-

marily, and when they do the pus is directed into the rectum at the same point that traumatism usually occurs. This pectinate line is likewise the dividing line between internal and external hemorrhoids. Hemorrhoids, when located above this line and can be prolapsed, are easily removed under local or infiltration anesthesia. Also, many cases of external hemorrhoids can be removed in the same way.

Dr. Gronnerud was called upon and voiced his pleasure at being invited to Quincy in a few pleasant sentences. The thanks of the society were voted Drs. Pennington and Gronnerud, and by vote they were elected honorary members of the Adams county branch. Dr. Carl E. Black, councilor of the Sixth district, in his pleasing, affable way, addressed the society, commending its good work and activities.

Adjournment.

CLARENCE A. WELLS, Secretary.

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The May meeting of the Adams county branch was held Monday, May 10, in the Elks' clubrooms, with President Henry Hart in the chair. Members present were Drs. Robbins, Bearman, Koch, Christie, Jr., Ball, Haxel, Mitchell, Center, Ericson, Gabriel, Shawgo, J. B. and Kirk, Becker, Rice, Brenner, Knox, Nichols, Blickhan, Ashton, Knapp, Kidd, Werner, Knapheide, Zimmermann and Wells; also Dr. O. F. Wellenreiter, a former member, of Perry, Ill. Attention was called to an acknowledgment of a collection of \$15.35 taken for the relief of the widow of the late Major James Carroll. Dr. Joseph Robbins at this meeting made a formal tender of his large and valuable library to the Adams County Medical Society. This generous gift was accepted by the president, and following the instructions of a motion, which was carried, appointed a committee of three, namely, Drs. Shawgo, Montgomery and Gilliland, to prepare a suitable formal acknowledgement of the splendid gift of Dr. Robbins. Adjournment was then had to the Hotel Newcomb. Reassembling in the afternoon the application of Dr. Wm. J. Earel was reported back from the censors in a favorable manner, and the ballot being ordered was found clear and he was declared unanimously elected. The subcommittees of the general committee of arrangements having in charge the preparations for the state convention then made their reports to the society, through their respective chairmen. Dr. G. P. Bearman then presented his paper, "The Status of the Tonsil," and covered the subject in a very satisfactory and scientific way. "Surgical Emergencies, Especially Fractures," was the subject of a splendid paper by Dr. W. W. Williams. Both papers were well received and quite generally discussed. Mr. R. R. Swaynie, an expert masseur, then gave demonstrations of a massage treatment on the arms of several members present.

Adjourned.

CLARENCE A. WELLS, Secretary.

#### BRAINERD MEDICAL SOCIETY.

The thirty-third annual meeting of the Brainerd District Medical Society was held Thursday, April 22, at Lincoln, Ill. The business sessions were held at 10 o'clock in the morning in the parlors of the Commercial Hotel. The association was addressed by Dr. Pettit, of Ottawa, president of the State Medical Society, who talked on medical organization. Dr. L. C. Taylor, of Springfield, also talked upon medical acts now pending before the legislature. Officers to serve for the ensuing year were elected as follows: President, Dr. Don M. Deal, Springfield; first vice-president, Dr. J. W. Bozarth, Mt. Pulaski; second vice-president, Dr. C. Remby, Lincoln; third vice-president, Dr. J. M. Wilcox, Clinton; secretary, Dr. H. S. Oyler, Lincoln; treasurer, Dr. C. C. Reed, Lincoln; board of censors, Drs. C. M. Noble, Bloomington, A. L. Brittin, Athens, and Campbell, of Clinton. Following the business session the visiting physicians, who were guests of the Logan County Medical Society, called upon Dr. Hart, superintendent of the Illinois Asylum for Feeble Minded, and were shown through that institution and later were entertained at luncheon at the Commercial Hotel.

**CARROLL COUNTY.**

The Carroll County Medical Society met May 11 at Chadwick, with President Dr. C. W. McPherson in the chair. There were present Drs. Harrison, Hendricks, Hunter, Johnson, Melugin, Mershon, McPherson of Hazelhurst, Metcalf, Natheson, Oberholser, Paekard, Powers, Riee, Rinedollar, Sagner, Wright, and Dr. Brigham of Ogle county. Dr. C. W. McPherson of Hazelhurst was chosen delegate to Quincy. The program of the meeting was as follows: "Reminiscences of a Physician's Life in Carroll County," by Dr. G. W. Johnson. This was an excellent paper and was greatly appreciated. "The Business Side," by Dr. G. E. Mershon, in which he discussed the country doctor's finances with vigor, stating that living is higher than ever before, manual labor and professional service, except the physician's, are receiving better remuneration, and if he would live in the comfort and dignity of his neighbors (the retired farmers) there must be an increase of the doctor's income, else in a few years the best young intellect will seek other professions. Dr. Metcalf read extracts from letters of a score of eminent physicians and surgeons, giving their opinions of the "H. M. C." nostrum, and also of the safety and usefulness of scopolamin-morphin in obstetrics before ether anesthesia. But, with one or two exceptions, the advice was: "It is dangerous; don't use it." A review of the more practical magazine articles of the year brought out interesting discussions, which were of value. The meeting then adjourned to meet at Mt. Carroll the second Tuesday of September. H. S. METCALF, Secretary.

**CASS COUNTY.**

The Cass County Medical Association met Wednesday, April 14, at Virginia. The following members were elected to the various offices: Dr. R. H. Garm, president, Beardstown; Dr. George Blye, first vice-president, Beardstown; Dr. A. R. Gayle, second vice-president, Ashland; Dr. M. Hubbard, treasurer, Virginia; Dr. J. A. McGee, secretary, Virginia; Dr. Geo. Blye, delegate to the state convention; Dr. J. G. Franken, of Chandlerville, alternate. An interesting meeting was held and all seemed to gather new interest.

J. A. MCGEE, M.D., Secretary.

**CENTRAL ILLINOIS DISTRICT MEDICAL SOCIETY**

The Central Illinois District Medical Society met Tuesday, April 27, at Pana in annual session, with thirty members present. The following officers were elected: President, Dr. Don Deal, of Springfield; first vice-president, Dr. F. A. Martin, Tower Hill; second vice-president, Dr. S. J. Sealing, Moweaqua; secretary, Dr. Charles Burgess, Pana; treasurer, Dr. H. H. Helms, Taylorville; censors, Drs. Brown of Decatur, Colt of Litchfield, and Brower of Hillsboro. An interesting address was delivered before the association by Dr. Pettit, of Ottawa, on "An Early Diagnosis of Tuberculosis."

**COOK COUNTY.****CHICAGO MEDICAL SOCIETY.***Regular Meeting, March 3.*

A regular meeting was held March 3, 1909, with Charles E. Humiston, president of the Aux Plaines Branch of the Chicago Medical Society, in the chair. The subject for the evening was a symposium on "The Public School Child." Frank Allport read a paper entitled "Eyes and Ears of School Children," which was discussed by Casey A. Wood. "Deformities of School Children," by E. W. Ryerson. "Hygiene of School Children," by J. W. Van Dershee.\* "School Playgrounds," by Henry B. Favill.\* The papers were discussed by Louis A. Dardiger, John L. Porter, Fenton B. Turck and, in closing, by E. W. Ryerson. Adjourned.

\* For text of papers see pages 632 and 636.

## DISCUSSION ON DR. ALLPORT'S PAPER.

Dr. Casey A. Wood:—I think there can be no doubt in the minds of those investigators who have considered this matter that some such examination as has been detailed by Dr. Allport should be carried out in all our schools, both public and private; but a difference of opinion has all along arisen after investigations of this kind as to the form of examination. In some countries with a paternal government, such as Germany, these examinations are made by what might be termed an ideal method, namely, a thorough examination of all school children once a year by a specialist in diseases of the eye, and by specialists in diseases of the ear, nose and throat, as well as by physicians appointed for other examinations. The great advantage of this form of inquiry is that one is enabled to detect the beginnings of disease which probably would not always be uncovered by such an examination as Dr. Allport has just outlined to you. I remember assisting, many years ago, in the city of Berlin, at examinations of the kind I have just referred to, where atropin was put into the eyes of all school children, where a thorough exploration of the fundus oculi was made for the purpose not only of detecting gross lesions but of searching for initial changes. The same careful and thorough examination was carried out with regard to the nose and throat. This plan is, of course, a superior one since, quite naturally, the physician would detect signs of disease which could not be made out by the ordinary school teacher.

By the method of Allport (because it is known the world over as bearing his name, and, in its perfected form, it is to him we are indebted for this very useful plan) we are enabled to make regular examinations of school children's eyes—easily and with good results. As it is impossible, even in private schools, to have a thorough examination made of the eyes of children (by using a cycloplegic and adopting other thorough means of examination), and since this method has failed wherever it has been tried, it ought to be dropped and no attempt should be made to enforce it.

The chief advantage, then, of the Allport method is this, that it can easily be carried out by a non-professional examiner. It is quite easy for any intelligent school teacher to detect the warning symptoms.

We should do all in our power to have such a law passed in Illinois as Dr. Allport has outlined. There are no objections to it, and it has been followed by good results wherever it has been adopted. It is the only practical method of examination we have.

Dr. Allport has not said much about the bearing of prophylaxis in the examination of school children. It is, of course, well to detect disease which produces defects such as the school teacher has to contend with, but the detection of those conditions early may prevent pupils from suffering in after life from diseases from which they will never recover. I need only mention in this connection short-sightedness, which, when detected in the early stages and properly treated, may not increase, but if left alone the patient may go on to blindness.

I should like to say a word or two about the school nurse. There is, for example, a difference in the work of the school nurse in Chicago and the same official of other cities. And that difference lies chiefly in that the school nurse here does not confine her attention to the diseases and other troubles of children in the school itself. In Chicago these nurses go to the homes of the mothers of these children, argue with them and labor with them in the interest of reform. The school nurse here is a sort of social and medical missionary and she does a world of good in this relation. It is well enough to examine the heads of the children for the pediculus capitis, but it is far better to go to the mothers of infected children and point out to them what to do in the future, particularly with reference to cleanliness. When we realize the importance of having nurses visit the homes of children and instruct their parents or guardians with reference to the hygiene of childhood, I think it would be "penny-wise-and-pound-foolish" to cut off the amount of money necessary for the maintenance of school nurses in this city. For instance, when a physician orders a child to have certain things done, his orders are much more likely to be carried out if the nurse follows up



this order by a visit to the home of the child. She there points out the reason to the mother why this or that should be done, and the effect is good.

I wish to say a word or two, in closing, about the repair of damage done to the eyes of school children in this city. Instead of regarding blind children as we have in the past, and speaking of them as *blind*, these children are put in our public schools, taught as other children are, and are encouraged to go about their daily tasks as other children do. They are encouraged to regard themselves as capable of making good citizens and of earning a living. They are encouraged to keep up with other children in their school classes. As a matter of practical knowledge, the majority of these children do make a good record in the public schools, and get along as well as the average child that has good eyes, and we ought to feel grateful to the superintendent of this department of our public schools for his careful and useful work in this direction.

#### DISCUSSION OF THE SYMPOSIUM ON THE PUBLIC SCHOOL CHILD.

Dr. Louis A. Derdiger:—This subject is so vast and of such great importance to all of us that one scarcely knows where to begin, but, having had some experience in this work, I wish to add a few points to those that have already been brought out.

Referring to the remarks of the last speaker, two years ago, while in New York City, I visited some of the schools. There they have a method of taking children out on the roofs of the schools, or, as they call them, roof gardens. They give them an outing every evening during the summer months. In one place, where there was a very large roof garden, there were eleven hundred children. They have teachers in dancing, so that the children are taught how to dance. Similar provisions are made for boat rides for the children. After studying these conditions in New York, and spending a few weeks in the Ghetto, where the children are numerous and live under poor hygienic surroundings, it occurred to me that one of the good things they had there was the roof garden. Then, they have a very good milk supply, which is looked after by a philanthropist whose name you all know, Mr. Straus. Aside from those things, there is the same condition which confronts them there that we have here, and which has been mentioned by some of the previous speakers, namely, What are you going to do with those children who are born from poor parents, who have not good clothes to wear, and no places to bathe, etc.? That is one of the great social problems we have to face at the present time, and is it any wonder that so many people are not only inclining towards sociology but towards socialism?

Dr. Van Der Slice gave us as clear and concise a picture as we would wish to have, and we ought, as medical men, when confronted with these conditions, to do more than we really have done in the past. We read in the newspapers that our school board has trouble with the Superintendent of Schools; he sends in his resignation; the board is loath to accept it, but finally does so, and then presents him with a loving-cup for the great work he has done. I do not wish to pass any unkind remarks, but I am simply speaking from the standpoint of one who has investigated these things. Does it seem reasonable or right that men should draw salaries who are supposed to educate children, when those children are not in a receptive mood, and who do not look after the sanitary conditions of school children, and see that they have abundant fresh air and such things as will enable them to do their work better? It seems to me that it is time for us, as physicians, to begin to act, and to look a little more into the political situation, not that I care to be a politician. But I believe that physicians should take a more active part in looking into these matters.

Dr. Ryerson spoke of curvature of the spine. I regret that he did not familiarize himself with the statistics of oculists in this regard. Let us take, for instance, Dr. Gould, of Philadelphia, who believes that 27 per cent. of the cases of curvature of the spine have been due to eye strain or to eye defects. Whether this is an exaggerated statement or not, I do not know. Dr. Cronin, of New York, found 20 per cent. of gross forms of defective eyesight, not including the serious defects.

With reference to Dr. Allport's paper, it would take hours to discuss it thoroughly, although he did not give us statistics, as I would like to have had him do. Nevertheless, there is a vast amount of work to be done. There is one point, however, that is worth discussing, and Dr. Wood has mentioned it, telling us about some of the methods that are in vogue in Germany as well as in America, and he thinks that Dr. Allport's method is the best. Some twelve years ago I tried a similar method in Oshkosh, Wisconsin. I examined the eyes of several thousand pupils during a period of five years. I found it was hard work and took a great deal of time. I had, however, the assistance of two teachers, one a teacher of botany, the other a teacher of physics, in making these examinations. They found it a difficult task, as they were not acquainted with refraction, etc., and were not in position to thoroughly examine the children. It is difficult to take these children and examine them, as teachers are expected to do, and find out whether they have eye defects or not. The physician (oculist) is the only one who can determine whether they have a high degree of hyperopia or myopia, or whether they have strabismus. If the children have suppurative otitis media they can determine it, but it is too much to expect teachers to find out these defects by making such superficial examinations.

I would like to give statistics of the examinations which I carried on from 1893 to 1898 and tell you also of the suggestions which I made to the superintendents of the schools at Milwaukee, Oshkosh and at other cities in Wisconsin, but my time is limited this evening.

Dr. John L. Porter:—After listening to what has been said by Dr. Allport about the necessity of examining school children for defects of the eyes and ears, and after the startling revelations of Dr. Van Der Slice and Dr. Favill's demonstration of the absolute necessity of physical education out of doors, it seems to me the whole proposition resolves itself into our going back behind the children and the school and educating the school teacher, the school board, and perhaps the state—and the state means the politicians. When it comes to educating politicians, we have quite an undertaking. I am interested in this subject from the point of view of the crippled children. To-day I received a report from Dr. Gillette, of St. Paul, in regard to the Crippled Children's Hospital that has been built by the state of Minnesota, and now under his supervision, in Minneapolis. He has demonstrated in the past four or five years the great advisability of the state looking after its dependent cripples, and not only putting them on their feet so that they may be well but teaching them manual training. They have now started in at Minneapolis to try and get the politicians to establish a training school out in the country for the crippled children, after having fitted them to begin manual training. I hope they will succeed. They have succeeded through the efforts of one man and one woman in getting a hospital under the care of the state, but here in this state, when we tried a few years ago to impress upon some of our politicians the necessity of the state making healthful children out of cripples, and making them self-supporting, the answer came back from the politicians that what few crippled children there were in the state controlled no votes. This is the problem we have to contend with in any effort at reform, and it reveals the power that controls the welfare of the children, whether crippled or normal. We have got to go away back where the power comes from, the power that establishes the play ground, the power that appropriates the money with which to pay the instructors for the playgrounds, to help to educate children in a way which we all believe is so needful, as has been pointed out by Dr. Favill. The carrying out of such details as getting the children to sit up straight, having medical examinations, etc., may do some good in a sporadic way, but before these things can be carried out in a broad way we must go farther back than the schools themselves.

Dr. Fenton B. Turk:—Not long ago a report appeared in one of our journals from an examiner, a professor at West Point, regarding the young men who come up for examination from the public schools, and he showed the great inefficiency of their training. If one wishes to get a fair estimate of the kind of education we are giving our pupils it is worth while to familiarize one's self with the sta-

tistics presented by this writer, which show the absolute inadequacy of our methods of teaching. Recent lectures of Professor Eliot, of Harvard, and especially of G. Stanley Hall, point out the great inefficiency of our methods of education all along the line and show the great advantage the Germans have over us in methods. The German is a genius for teaching. Every German has a passion for it. He is born almost with a passion to teach his children. We may almost say that Germany is a nation of teachers, and this accounts for their superiority in all things pertaining to intellectual growth and development.

In our own country we are making rapid advances largely through our productiveness, but the time is soon coming when we shall not be as productive as we are at present, and the problems we shall have to contend with will be intellectual ones. One great factor of contention in this country in all matters is the politicians. But, after all, education in these matters must come.

And who are the educators of the people? With all due credit to the great writers, is not the general practitioner of medicine the one to educate the people in regard to such matters as vaccination, the question involving the eyesight of children, etc.? As to infection from diphtheria, and the question of various infectious diseases, education in these things must come from the physician. Why? Because he knows. He is familiar with these things. He is able to talk to people intelligently about them. But when it comes to hygiene, exercise and diet, many, many physicians do not know much about these subjects. How, then, can they teach people to exercise? The medical student is not taught methods of exercise in a medical school anywhere. Furthermore, the average physician knows very little about dietetics, about hydrotherapy, and other things which relate to the upbuilding of the child. In order to develop a system of education among our children, the physicians themselves must be educated along lines suitable for the development of children. This not only means physical development, but dietetic development, as well as a looking toward the fundamental principles for the development of children generally.

Dr. E. W. Ryerson (closing):—I am perfectly familiar with the ideas of Dr. George M. Gould with reference to eyestrain causing a large percentage of the cases of scoliosis in the human race; but Dr. Gould is an extremist. He believes that eye-strain can cause almost anything from ingrowing toe nail to volvulus.

#### *Regular Meeting, March 17.*

A regular meeting of the Chicago Medical Society was held March 17, 1909, with Dr. F. D. Marshall, president of the West Side Branch, in the chair. Dr. Walter B. Metcalf read a paper entitled "Tuberculosis: Its Treatment with Tuberculinum Koch, and an Index to Dosage,"\* which was discussed by Drs. Frederick Tice, Clarence L. Wheaton, Lott Snoddy, Stuart Johnstone, Max Biesenthal, John F. Huitgen, and discussion closed by the essayist.

#### DISCUSSION.

Dr. Leusman:—The distinguished honor to discuss this important paper, original and pregnant with new ideas, has been, like greatness on others, thrust upon me. No one, to my limited knowledge, has heretofore either suggested or made use of this new method systematically applied to the cure of tuberculosis. Their reasoning appears to be in accord with our ideas of immunization. If others, after becoming skilled in the exercise of the Snoddy and Metcalf method, will obtain similar results, and I have no skepticism as to that, consumptives and their attending doctors may alike feel grateful to the labors and the genius as exemplified by the originators and projectors of a new idea so useful and beneficial. And then, when once understood and mastered, how practical, simple, relatively inexpensive, dependable and generally expedient and efficient promises this new method to be as compared with Wright's Opsonic Index. Nor is this all. Hoyt, an English experimenter, in a recent issue (February 13) of the *British Medical Journal*, after an extensive trial of over three years of opsonic index

\* For text of paper see page 639.

for diagnosis, prognosis and treatment in tuberculosis, does not regard it as a safe guide. Even in the hands of acknowledged masters in the art of taking the opsonic index, the method has failed to make good and does not deserve the reputation in which it is held. The very complexity, intricacy, expensiveness and exclusiveness of a method frequently recommend it to the sagacity, ingenuousness and calculation of those whom industry, genius, politics, subserviency and general good fortune has placed in authoritative hospital positions. There, from within the confines of sacred walls and with opportunities unlimited as compared to the outsider, many a method, surgical and otherwise, has been heralded to the rank and file of a credulous profession as superlatively good, only to be found out, after a time, to be superlatively useless, perhaps dangerous, not to speak of its expense. But expense and flattering promises are perhaps among the greatest attractions to the unfortunate sick rich or poor, and thus serve to keep in vogue methods of treatment that much sooner should find their way into the medical graveyard or crematory.

The Snoddy and Metcalf method, once mastered, needs no arena for its administration, no extensive hospital wards, where none but the privileged staff is good enough and knows enough how to treat the sick poor and sick rich, it needs no expensive laboratory fitted up with the latest paraphernalia. All it does need is understanding on the part of the doctor and cooperation on the part of the patient. The temperature index is pre-eminent—so we hope it will prove to be—the method for the general practitioner in the country and in the city, very much we trust to the real benefit of the tuberculosis patient.

Dr. Frederick Tice:—It seems to me this subject is one which is uppermost in our minds at the present time. There is no subject at present of greater consideration, not only to the medical profession but to the entire civilized world than this. It is this great crusade against the white plague that is creating so much excitement and so much interest at the present time, and any contribution on the subject is of interest. I have enjoyed the paper of Dr. Metcalf very much. There are many points in it with which we must all agree; there are others that were not made as lucid as they might be, and a few which we can not accept. So far as the treatment of tuberculosis at the present time is concerned, we must all agree that we have no specific treatment. Those who have had the greatest experience, based upon not a few but many cases, agree that we must have a combined treatment, which consists of hygiene, diet and tuberculin.

One point in reference to the treatment of tuberculosis is, that we must have an early diagnosis. We must detect the incipient cases, and upon the detection of the cases in the incipient stage depends in great part the curability of the disease. At first, when tuberculosis hospitals and sanatoria were opened, it was thought we would accomplish great results. At the present time there is considerable dissatisfaction and disappointment because the results are not so beneficial, and this is due to the fact that the cases are too far advanced. We can detect the disease early either by a careful examination or by the use of tuberculin. Some time ago I was rather opposed to the use of tuberculin subcutaneously for diagnosis, because unquestionably we have had unfavorable results. At the present time we can use tuberculin by some other method. The essayist referred to the use of tuberculin by the Wolff-Eisner method, the ocular reaction, and about a year ago we had occasion to make a communication on the subject, but at present I look upon it with disfavor because of the unfavorable results. We can, however, use tuberculin by other methods, as the von Pirquet, vaccination method, or we can use the Moro ointment method, or we can rub the tuberculin on the skin and receive equally good results without danger to the patient. The results of these tests must be combined with physical examination. A positive tuberculin reaction, either subcutaneous or local, does not indicate pulmonary tuberculosis. They must be combined with our physical findings.

The next point which Dr. Metcalf neglected to mention was the dosage of the tuberculin. Ten, twelve or fourteen years ago, when we used tuberculin subcutaneously, we employed it in comparatively large doses. I can recall very distinctly using five or eight milligrams as a diagnostic dose. At the present time



we keep within one milligram, preferably 1/100 or 1/50 of a milligram as the initial dose, in order to avoid any unfavorable results. This, I believe, we should always bear in mind, and remember the possibilities of unfavorable or untoward results.

Next, as to the treatment of tuberculosis with tuberculin, I look upon it at the present time with much favor. I believe it is one of the most useful remedies at our command; but our experience would seem to indicate that we can obtain equally good results with other forms of tuberculin as with the old Koch tuberculin. At present I am inclined to favor the B. F. or the Deny filtrate, as that seems to give better results, and this brings up the consideration of what we hope to do with tuberculin. In brief, we, of course, hope to produce a cure, but how? By immunizing the patient, but how do we produce this immunity? We divide this into two methods, either by the vaccination method, that is, by the use of the old Koch tuberculin, championed by Koch and Wright, and by the injection into the system, producing stimulation of all the protective elements, and thereby bringing about a specific immunity; or we introduce into the system, which is championed by Sahli and by Deny, a toxin, and by gradually increasing the toxin, produce an immunity by increasing the tolerance. Clinically, the control and the dosage of the tuberculin therapeutically are of great consideration. At present we usually begin with minimal doses. With the old Koch's tuberculin we begin with 1/10000 of a milligram; with the Deny filtrate, 1/2000 of a milligram, and gradually increase the dose, which we control, not by the opsonic index, because those who have had the largest experience have condemned this method on the ground that it is not accurate and reliable; it is altogether too difficult to determine; it takes a great deal of technique and much time, and in the communication read by Dr. Webb, of Colorado Springs, before this society a year ago in which he demonstrated a large number of cases, we were told that the opsonic index is absolutely unreliable because we have so many non-acid bacilli, so that the opsonic index has been abandoned in most of our large reputable institutions and by the best workers. We can control the dosage of the tuberculin, however, as suggested in the paper, by a careful watch of the temperature. When we administer the old Koch tuberculin we always avoid a reaction, which was emphasized by Trudeau years ago, but where we use a formed toxin, the B. F., the Deny filtrate, a slight or moderate reaction is desirable.

As to estimating the temperature and the control of the tuberculin by the temperature, while it has been designated as something new, there is nothing new in it whatever. It was this temperature which we looked for as one of the indications of a positive reaction when Koch first indicated early diagnosis by the use of tuberculin. Subsequently and for years it was regarded and used as a means of avoiding an overdose of the tuberculin, so there is nothing new in that.

There is another means which we are now employing as a guide in the use of tuberculin, which consists in vaccinating the patient, usually with two or three forms of tuberculin, and on this we will have something to say later. We use, instead of one tuberculin, as suggested by Pirquet, the old Koch's tuberculin, the B. F., and the bovine tuberculin, making four scarifications and applying three tuberculins. The tuberculin which reacts most vigorously is the one which indicates the probable form of the infection. It also indicates the form of tuberculin which should be employed in the treatment of that case. In the course of a few days the reaction subsides, and we place the patient on the appropriate tuberculin, the old Koch, the B. F., and in the course of a month or six weeks, if we exceed the dose indicated in that case, the vaccination rekindles and indicates to us that we are approaching or exceeding the proper dose. That is the means we are employing at present in the therapeutic administration of tuberculin.

In conclusion, I wish to say that tuberculin can and should be used as a means of diagnosis, so that we can detect the disease early. This is being done in many of our foreign cities, in that all of the school children and all the suspects are subjected to vaccination. This, I believe, is preferable to the subcutaneous administration of the tuberculin, and if it is used subcutaneously it

must be used in small and appropriate doses. We look upon tuberculin as a very valuable means of treatment, but it must be employed in conjunction with hygienic and dietetic treatment. This is important. The dosage we are to control either by the temperature or the influence of the vaccination, or in many instances, as emphasized a long time ago by Trudeau, the patient will indicate to you the proper dosage. Dr. Webb, in his estimate of the value of the opsonic index related here a year ago that many patients could tell by their own feelings as to the condition of the opsonic index, whether high or low.

Dr. Clarence L. Wheaton:—I have listened with great pleasure to this important contribution. I feel that we should, at the present time, exercise the greatest conservatism in the use of tuberculin. I feel that experimentation clinically should continue. At the tuberculosis dispensary at Rush Medical College we can report on over one thousand inoculations for the purpose of immunization, but we feel that we should continue our researches and not make our report public until we can add another thousand cases.

The production of artificial immunity in the human subject against tuberculosis is the most recent application of our biologic therapy. The introduction into the human organism of stimulating bacterial agents is indeed a rational procedure proved by the overwhelming logic of experimental research.

The results already achieved in large clinical experience by many workers leave no room for the element of doubt as to the efficiency of specific medication as at present employed. The early experiments of Koch in the inoculation of guinea-pigs with pure cultures of tubercle bacilli are familiar to us all. In the healthy pig no local reaction occurred; there was apparent healing at the site of inoculation with the formation of a hard nodule at the expiration of two weeks, and this usually was present until the death of the pig. In tuberculous pigs there was skin necrosis followed by superficial ulceration which finally healed. Dead bacilli produced no constitutional disturbance when injected into the healthy pig; in the tuberculous there was prolongation of life. These experiments confirmed the assumption that some immunity was acquired against reinfection; that the product of the dead tubercle bacilli exerted some specific influence.

In 1890 Koch's report on tuberculin was published and the remedy hailed throughout the world as a specific. The disastrous results following its careless, too hasty and general administration resulted in an era of widespread condemnation. The pendulum, however, swings again to a period of more conservative recognition of the value of tuberculin as a therapeutic agent. Experimental research having demonstrated the possibility of conferring immunity upon animals by the use of attenuated cultures of tubercle bacilli, has renewed our efforts in this field of research with the hope of achieving similar results in man.

In the practical consideration of this subject we are concerned mainly with two preparations: Koch's old tuberculin and Deny's bouillon filtrate. The former is prepared from pure cultures of the tubercle bacillus of five or six weeks' growth upon 5 per cent. glycerin bouillon. The culture media containing the germs are evaporated to one-tenth of their volume and filtered through porcelain to remove the germs. Old tuberculin contains all of the soluble products of the tubercle bacilli in a 50 per cent. glycerin solution.

Deny's tuberculin is prepared from the filtrate of bouillon cultures of the tubercle bacilli and contains all the soluble products elaborated by the bacteria while grown on bouillon. It differs essentially from old tuberculin in that no heat is used in its preparation.

I regret Dr. Metcalf did not mention the technique of immunizing his patients. In our clinical work at the dispensary at Rush Medical College we begin with small doses of tuberculin at first, 1000th of a milligram and gradually increase until we reach a maximum of one milligram. I have in my report the original history sheet, taken from the file this afternoon, of a young girl who had extensive disintegration of the right lung; the upper apex of the left was also involved, and râles extending down to the third interspace on the right side, with numerous râles posteriorly. The girl had been having hemorrhages. She was in Colorado for some time, and while there developed nostalgia on account of being

separated from her friends. Finally she returned to Chicago in a deplorable condition and came under our observation. She was placed in the open air, sleeping out of doors, and under the absolute control of a nurse. Sept. 7, 1908, she came to the clinic, weighing 98¾ pounds, and on September 10, 1908, we began the administration of tuberculin, giving her one decigram of solution No. 5. Each c.c. equals 1-10000th milligram, which is an infinitesimally small dose. This has been continued up to the present time. She has received five decigrams of a solution of which one c.c. equals one-hundredth milligram of tuberculin. Her weight this afternoon was 115 pounds. Her cough has stopped, it having stopped since Feb. 3, 1909. Her weight on entering the clinic was 98¾ pounds. This young woman will be examined possibly Saturday, and if the findings are negative the tuberculin will be discontinued and the case presumed to have been arrested.

An important point in the administration of tuberculin is that the patient must be under absolute control. The Chicago Tuberculosis Institute has made provision so that these patients can take their own temperatures: they keep personal records, and in that way tuberculin can be administered more intelligently. Patients receiving tuberculin should have their temperature recorded four times a day.

Relative to the production of artificial immunity, the use of tuberculin is fully in accord with the modern theories.

#### CONCLUSIONS.

1. In cases of pulmonary tuberculosis, without temperature and low resistance, the proper administration of tuberculin is of undoubted efficacy.

2. Tuberculin is capable of producing great injury to the patient, and this injurious influence calls for the greatest discretion in its proper administration.

3. There is frequently increased cough and expectoration following its injection. This in itself is not an untoward symptom.

4. Persistence of such clinical manifestations as general lassitude and physical weakness should cause the discontinuance of its administration.

5. In the presence of a mixed infection, with high temperature incident thereto, the use of tuberculin is inexpedient.

6. The opsonic findings in dispensary practice are impracticable at this time. Clinical study is absolutely essential in determining the size and frequency of the dose.

Dr. Lot Snoddy:—In replying to the remarks of the gentleman who stated that tuberculinum Koch is not a specific, I wish to say that the thirty-six cases treated with it were bad cases. The involvement was enormous. Most of these patients were in bed two-thirds of the time. They had no hygienic surroundings; they had no sufficient food. I visited them at their homes or hovels, and tuberculinum Koch did the work. That, it seems to me, is conclusive. The patients have recovered. There have been no relapses. They are apparently immune. I have tried since in one case to see if I could discover tubercle bacilli. At the Columbus Medical Laboratory they went so far as to examine the sputum of a patient who had a severe cold, thinking when exfoliation occurred it might be possible to find the tubercle bacillus, but they did not.

There is a gentleman present who started with me in treating tuberculosis by this agent. He was induced to do so by a doctor who lived in Chicago. He can tell you all about how to treat these cases. I refer to Dr. Stuart Johnstone.

Dr. Stuart Johnstone:—Some sixteen years ago a great deal was said with reference to Koch's tuberculin, and a short time after that I witnessed a cure at the hands of an Eastern physician of a most pronounced and advanced case of tuberculosis by its use. The case itself was such a marked one, and recovery was so prompt and satisfactory by this treatment, even after every one had given up all hope of recovery of the patient, it attracted considerable attention. Climatic treatment was tried, and everything else resorted to in the hands of an intelligent patient without avail. I at once began the use of tuberculinum Koch in this case, and have been using it quietly up to the present time in treating other cases of tuberculosis. I have administered up to date some ten injections of tuberculinum

Koch for therapeutic purposes, and I have given one injection for diagnostic purposes. I use tuberculin almost daily in my office as a routine practice; consequently it seems odd to me to hear it referred to as an agent fraught with tremendous danger. On the other hand, I recognize its danger. I presume morphin must have come into use with exactly the same caution, and I regard morphin as manageable as tuberculinum Koch, and vice versa. The number of cases I have handled from the time I began its use is large. I have not cared to publish them, for the reason, first, I had no particular desire to follow it as a specialty; and, second, I had no desire to stem the tide of opinion from its use in the hands of medical men. However, I have continued to use it.

The use of tuberculin as a diagnostic agent, as I have stated, is a routine practice. It is my habit when patients come to the office who have been in the hands of other physicians and have not been doing well, if they have a definite lot of symptoms, or even if they have one single or prominent symptom pointing to any particular organ, and they are running down, if I find, after taking the temperature, it is elevated, and they have not responded to expectant treatment, to administer tuberculinum Koch, and in a certain percentage of cases I get a reaction, and in those which show a reaction I put them on tuberculinum Koch. When the cases are caught in that stage when there are no signs, no degeneration which would declare itself through the ordinary instruments for its detection, there is no exception in my experience to the rules of recovery. Every one of them recovered. If I got a reaction and followed it up, and found any tissue particularly involved, I could detect it and get a reaction, and tuberculin administered on those premises was followed by a comparatively early recovery, so that I have come to regard tuberculinum Koch as an absolute specific for the cure of tuberculosis, if the case is caught early enough, and the "if" should be underscored. The difficulty lies in getting these patients early enough. In the stage mentioned they do not come for treatment unless they are patients who look after every trifle in connection with their health, and place themselves at once under the care of medical men if there is anything wrong. I say to them in any community whatever, in one generation tuberculosis can be as definitely and effectually driven out as smallpox by the use, if it were possible, of vaccination, and be as distinct and positive a protection against tuberculosis as is vaccination against smallpox. The moment the case becomes advanced to some degree, the prognosis is by no means so certain, so favorable, but one can tell in from four to six weeks whether treatment is going to do any good toward effecting a cure. Frequently the relatives of patients ask the question, Will they get better? I tell them, I do not know, but you will know yourselves in from four to six weeks, and you need not ask me. I tell the relatives they had better let the patient stay and take this treatment, and not to go away; that if they want to send him away later, do so. In a certain number of cases with degeneration of lung tissue I find their resistance is poor. Their powers of stimulation are poor. We can not give a prognosis in those cases.

The treatment is somewhat complex; but tuberculinum Koch is the sheet-anchor on which I depend. There are many other things on which I rely. Nutrition of the patient, of course, is well looked after and emphasized; but tuberculin is the one thing on which I place great reliance, and consequently I am a strong advocate of it. I firmly believe that if the case is caught early enough, every one will recover with tuberculinum Koch. I have tried half a dozen different sera, but have returned to the tuberculin of Koch as the most effective agent in my hands. In all cases that have received the injections I have carefully inquired as to whether any of them have sustained any injury, and the answer has been negative. I know of no case that has been injured by the injections of tuberculin. I have noticed a profound reaction in some cases, but have learned to be cautious with the first dose, whether it be given for diagnostic or therapeutic purposes, because some of them show a tendency to react tremendously, and therefore great caution is needed at this stage.

Dr. Max Biesenthal:—It has been said that one of the principal factors in the treatment of pulmonary tuberculosis is optimism in both physician and patient, and from the paper that has been presented this evening apparently the



results that have been obtained are largely due to the amount of optimism which entered into the cure with tuberculin, as evidenced by thirty successful cases out of thirty-six reported.

When Professor Denys spoke before the Chicago Medical Society of the cure of tuberculosis with his filtrate, he showed very clearly that the largest number of cures were effected by injections given in the first or primary stage of the disease; that in the secondary or moderately advanced cases the percentage of cures dropped, and that when it came to the third stage, the stage of cavities, with marked involvement of lung tissue, the percentage of cures was reduced to five or six per cent.

Now, if I am not mistaken, such are the results generally obtained in the treatment of tuberculosis in its various stages by the tuberculosis workers. Trudeau, in his work on tuberculin, says that the use of tuberculin adds 18 per cent. more chance of a cure to your patient, but emphasizes the fact that a large proportion of this 18 per cent. is in the early cases.

Dr. Metcalf, in his paper, did not mention the type of cases which he treated, but Dr. Snoddy said they were of the advanced type. For years and years practitioners in Chicago have used tuberculin. It is nothing new. It was used before I started to attend a medical college. The method is one that has been used since the time (1890) Koch gave to the world the use of tuberculin; but in spite of this fact, in Chicago last year there were 3,600 deaths from tuberculosis. Of course, there may be something in the method of treatment of Dr. Metcalf and Dr. Snoddy with which the average practitioner is not familiar, but that feature has not been brought out to-night.

Nothing has been said as to the dosage. That is one of the prime essentials in using tuberculin. Tuberculin is not wholly harmless. It is an agent which must be used with care. Like morphin, it is not without danger; yet it is a most valuable agent. It is of the greatest benefit when used judiciously, but when used indiscriminately it may prove to be one of the greatest curses ever given to mankind.

I should like Dr. Metcalf, when he closes the discussion, discuss briefly the question of dosage of tuberculin, his method of administration, and how often he gives tuberculin.

Dr. J. F. Hultgen:—We have heard such a maze of opinions and notions to-night, all jumbled up. Between optimism on the one hand, and pessimism on the other, I really don't know where the average practitioner would stand. One man speaks of tuberculin as a specific, and another says that optimism on the part of the patient has a good deal to do in effecting a cure. The whole question has been so confused that one has to think a little to find out where he is.

After listening to this paper I find the method is old-fashioned, although the essayist may regard it as the newly discovered Snoddy-Metcalf method. In the first place, I do not see what claim to priority it has. In the second place, I don't see what real merit it has. It would seem that their guide in the administration of tuberculin is elevation of temperature. But there are a large number of patients with tuberculosis of the lungs who have no elevation of temperature, and the chances are they never have had any elevation of temperature. There are algid periods in a considerable number of cases. What are you going to do with such patients? I have scores of them. Every one who is interested in tuberculosis knows of a number of cases where the temperature was never above normal, consequently, they could not use temperature as a guide. The great majority of patients with tuberculosis, I dare say over 80 per cent., are of the ambulatory and dispensary type. They can not be taken to any sanatorium. They must be kept at work. How can you keep track of the temperatures of such patients? You can not. It is preposterous to presume that it can be done. If you give tuberculin to such patients you can not rely on what they say as to their condition or temperature. This work can only be carried out efficiently in sanatoria and in hospitals. Tuberculin is good for a large majority of patients, but should be used in conjunction with other things, as, for instance, the opsonic index, when taken by an expert, the condition of the blood, etc. You can not determine the extent of the lesion in a patient whose blood you have never exam-

ined. Every one who has worked with and studied tuberculous cases knows that early and repeated clinical examinations are not sufficient to establish a diagnosis in the early stage of the disease. One may have to work and study a case for two weeks before he can arrive approximately at the condition in a case of tuberculosis. That being the case, how can you gauge the initial dose of tuberculin without knowing even the stage of pulmonary lesion on hand.

Dr. Stuart Johnstone said he has used tuberculin for sixteen years and in a large number of cases. I am exceedingly sorry we did not hear this report before, for I believe it to be the manifest duty of every scientific man to collect data as he goes along and to report the results of his work. There are no secrets in medicine. Everything we know is the patrimony of science. It should not be kept secret. There is no new fangled method of Jones and Smith. Everything in medicine should be common property.

As to the number of recoveries reported. We have been told that of 36 cases, 6 died. The others recovered. In all cases the lungs were "*very much*" involved. They do not say whether the lungs were corresponding to Turban's schema I, II, or III. We are left in the dark as to that. We can not draw any conclusion as to the stage of the disease in any of these cases from what has been said. Nothing was said about mixed infection, nor how often the sputum was examined, nor whether there was any examination made of the urine or blood. There was simply a perennial harping on tuberculin. Too many conclusions are drawn from a positive diagnostic reaction to tuberculin. If a given case in the absence of physical findings shows a positive tuberculin reaction, what are we to do? We will try to go slow, very slow. How can we say with conviction that as soon as a man who is going down a little has consulted several doctors and has been treated by them without much benefit, is given injections of tuberculin, will improve, or that tuberculin is a good thing for him. It is very difficult in a given case to connect a certain given lesion with a positive v. Pirquet or Calmette reaction. Occasionally tuberculosis exists without giving the patient any concern whatever. We can not draw reliable conclusions from one single positive diagnostic test in a case of tuberculosis. The fact that a patient does not show any more reaction after a certain time may mean a number of things: Firstly, that he has acquired a certain amount of immunity for the time being, which was conferred upon him by the administration of tuberculin. Denys claims no more than that. When he read a paper before this society and was asked that question he said that these patients did not react to tuberculin any more because they had acquired a certain immunity, and this is the only conclusion a man like Denys could draw, an industrious, honest investigator who has been working with his own filtrate since 1892. If he can say no more, I don't see why Snoddy-Metcalf can claim that tuberculin is a specific and compare it with vaccination against smallpox or with the immunity cowpox produces against human smallpox. It is ridiculous to compare the two. Since in tuberculosis we have nothing but passive, probably transitory, immunity conferred, how can we speak of it in the same breath with vaccination against smallpox, an active immunity produced by a living virus.

Dr. Metcalf (closing the discussion):—I do not know the names of all of the gentlemen who have discussed this paper, so will not be able to answer the questions personally, neither will I be able to reply to them all in the limited time given for the discussion.

It would have been impossible to report in detail the progress of all of the cases we have treated with tuberculinum Koch. We would not impose on your time that much. What we have given is the result of a portion of our work done in private practice. Unfortunately we have not, in this work, had the advantages of institutional facilities.

We have simply reported the results we have obtained in general practice, doing the best that we could with what we had to do with. We offer this contribution not so much for the men who are fortunate enough to have the advantages of institutional facilities and also have the advantages of the added treatment which such institutions afford, but have tried to present the subject in a

simple manner for the general practitioner in order that he may retain a portion of his patients and be able to treat them successfully with tuberculin.

Reference was made to tuberculin as a specific. I said, that tuberculin was a specific, to the same degree for tuberculosis that we considered mercury a specific for syphilis. I did not say that it was an absolute specific for tuberculosis.

Dr. Wheaton raised the question in regard to its use during high temperature. Our experience has been that if we use tuberculin in a small enough dose we can give it to patients who have a high temperature.

As to the dose, we ordinary practitioners, as a rule, are not able at the bedside of our patients to split remedies into centigrams and milligrams.

We have tried to give you something that is simple and plain. We use one drop as our original dilution quantity. We take an ordinary medicine dropper and obtain one drop; this is our initial division dose. In all cases in which we want to use 1/120 of a drop for a dose we take the ordinary druggists graduate and fill it up to the mark where it says 120 drops, with distilled water; in this we put one drop of Koch's old tuberculin; then thoroughly agitate the contents with the medicine dropper; one drop of this solution is put into a little receptacle, to this is added fifteen drops of distilled water; this is well mixed and is used as a dose. This method the general practitioner can use at the bedside or in his office.

In institutions they have the facilities and instruments for determining the dose more scientifically, and I do not want to detract from the work that they are doing. We give two or three doses each week.

The question was asked as to the size of the dose that we give. That is an uncertain quantity. One might ask, what is the dose of the iodid of potassium? I do not know; we give on an average 1/100 of a minim as our initial dose, to some patients we give 1/300 or 1/500 of a minim. The dose is gradually increased, but as soon as we get a reaction we go no higher, or decrease the dose, and as soon as the patient is able to tolerate it we begin to increase the dose again.

I do not think that our results should be compared with those which other men have obtained by using two or three different kinds of tuberculin on the same patient at the same time.

#### JOINT MEETING OF CHICAGO MEDICAL SOCIETY AND CHICAGO UROLOGICAL SOCIETY.

A joint meeting of the Chicago Medical and Chicago Urological societies was held March 24, 1909, with David Lieberthal, president of the Chicago Urological Society, in the chair. Robert H. Herbst read a paper entitled "Indications and Limitations for the use of Antigonococcus Serums.\*" Victor D. Lespinasse read a paper on "The Uses of Gonococcic Vaccine in (a) Therapy, and (b) Diagnosis of Acute and Chronic Gonorrhea in Man." Frank Billings followed with remarks on "Tuberculin and Colon Bacillus Vaccine in Genitourinary Therapies." Ruth Vail and Mary C. Lincoln contributed a joint paper on "Comparative Results in the Treatment of Gonorrhea in Young Girls." The papers were discussed by William T. Belfield, L. L. McArthur, William J. Butler, and the discussion closed by Lespinasse and Billings. Adjourned.

#### DISCUSSION ON THE PAPERS OF DRS. HERBST, LESPINASSE, BILLINGS AND VAIL.

Dr. William T. Belfield:—Dr. Herbst's conclusions as to the value of antigonococcus serum agree entirely with my own; indeed, our observations are based largely on a series of cases treated in my clinic. There are two or three cases that occur to me which illustrate certain points that it might be well for us to remember. One of them was the following:

A certain young man came to be relieved of a gleet which had tormented him for some two years. I notice that he limped badly and found on inquiry that this limp had appeared about six months after the acquisition of the chronic gonorrhea for which he desired treatment. It affected the left ankle and had

\* For text of paper see page 643.

been pronounced by physicians, whom he consulted for the relief of his gleet, to be due to syphilis or gout. Treatment directed towards these supposed causes, however, seemed to be without avail. The patient had of his own accord gone to Hot Springs; but these magical waters failed to relieve him. It occurred to me that this might be a gonococcus infection, or rather an intoxication of the joint; so I treated him with the serum and had the satisfaction of seeing his gout or syphilis entirely clear up in about three weeks. His gonorrheal rheumatism had never been acute nor severe. Neither the patient nor any of his physicians had associated his trouble with the gonorrheal infection. Perhaps many of us look upon gonorrheal rheumatism as something that begins with a great deal of severity, the cause of which can hardly be overlooked if the patient, at the same time, suffers from gonorrhea. But many cases of gonorrheal rheumatism are very insidious from the start, and for that reason its etiology may be overlooked. Perhaps some cases of so-called chronic rheumatism may be gonorrheal. It was further interesting in this case to note that while the gonorrheal rheumatism of eighteen months' standing promptly disappeared in three weeks under serum treatment, the gleet was not affected thereby, nor were the number of gonococci in the discharge rapidly reduced. It was only after three months' local treatment that the local disease disappeared.

My experience with the gonococcus vaccines is less extensive than with the serum. So far as I can judge, there is no practical difference in their therapeutic values. Neither the serum nor vaccine in my observation has materially improved the gonococcus infection of the mucous membranes. Both, however, as a rule, have very prompt curative effects upon the so-called gonorrheal rheumatism.

Dr. Lespiuasse's conclusion, that by means of the bacterines we shall be enabled to decide when a man is cured of gonococcic infection, seem to me rather ill-founded. We must remember that a large part of the surface which may be infected by the gonococcus lies beyond the urethra. The entire genital tract from the prostatic urethra outward to the head of the epididymis is oftentimes infected, and sometimes the urethra is clear of gonococcic infection entirely by every test we make, yet this same infection exists in parts beyond the urethra. I want, therefore, a little more evidence, evidence including the entire genital tract, before I would be willing to accept Dr. Lespiuasse's conclusion that we have in the gonococcus vaccine a means for determining the absence of gonococcic infection.

The report of Drs. Vail and Lincoln is a model of scientific research. Dr. Billings' report of his experience and observation with the colon bacillus vaccine is the most instructive and inspiring thing I have ever heard in connection with this subject of vaccine treatment. We well know that we can accept at its face value everything he says; and though his conclusions were not generalized at all, they were simply individual cases, yet there is nothing that I have read or heard that indicates such a distinct relation of cause and effect in the cure of these bacterial infections as these cases in which he reports the use of colon bacillus vaccine.

I have had no experience in the use of the colon bacillus vaccine in the urinary tract, except some negative ones, which doubtless failed because of lack of proper care and persistence on my part. But I have had some experience with the colon bacillus vaccines in the lesions of the male genital tract. It is a common thing to find the colon bacillus either alone or evidently the chief sinner in the chronic infections of the genital tract, the prostate and the vesicles. It is surprising that we have so long ignored the fact that just above the deep urethra we have not only the urinary bladder, but two seminal bladders. We have for many years searched the urinary bladder with the cystoscope and its contents with the microscope, but we have practically ignored the seminal bladders; we are familiar with urinary cystitis, but ignore seminal cystitis. We find the seminal bladders are frequently the seat of chronic colon bacillus infection, and it is against this particularly that I have endeavored to use colon bacillus vaccines. In two cases no results were produced that I could detect; in three, possibly four cases, the effects of the vaccines were brilliant.



In the use of tuberculin I have had quite a little observation. As you know, there are some nine or ten tuberculins on the market. The only two I have used are the old tuberculin brought out in 1891, and the new tuberculin, or T. R., much used in the last three years. It is the latter with which I have had therapeutical experience. As to the other seven or eight kinds, I know nothing except from reading. Certainly, new tuberculin is a therapeutic agent that should be used in all cases of tuberculosis of the genital or urinary tract. Of course, in none of these cases do we rely solely upon tuberculin. We naturally use all possible hygienic measures favorable to the patient; but I am thoroughly convinced that with the tuberculin added to these measures we secure results that I, at least, have never seen without the tuberculin. One of the prompt and striking effects of the use of new tuberculin has been the rapid relief of the dreadful agony of constant and painful urination. This is common among patients who have tuberculosis of the bladder or prostate of kidney. I recall two cases in women of tuberculosis of the kidney. In one case the disease is unilateral, in the other bilateral. These women were tortured night and day with painful and frequent urination, obliged to urinate every twenty, thirty or sixty minutes; but they soon gained relief from that torture by the use of tuberculin. The intervals were increased from one to two and a half hours, the pain and distress vanishing almost completely. I know of no form of medication, not even morphin itself, which will produce that effect so promptly and so often in these cases of tuberculosis. It seems to me that in these two things the gonococcus vaccine and serum, we have agents that are invaluable against gonorrheal rheumatism and virtually worthless against gonococcic infection. In tuberculin we have an agent that we should put to a very extensive test in all cases of tuberculosis.

Dh. L. L. McArthur:—When you have listened to the reports of a series of investigators who have taken the time and pains and the study, as has been done by those reporting to-night, you will note a unanimity of opinion that is striking. I do not feel that at this late hour, after hearing from the essayists, time should be further consumed in discussion. I want, however, to announce that, when two years ago our laboratory made their first report before this society, sufficient interest was stimulated among its members to make further research by others possible.

The report which Dr. Vail has presented to-night is one which, in a way, arose from the report of two years ago, for after that meeting an ex-president of the society, Dr. William E. Morgan, came to me and gave me a check for \$500 which he desired should be utilized to further this work. That money has been utilized for a study of the gonococcal vaccine by Dr. Vail. This report covers thirteen months of observation of patients, so situated that they could be well observed in an institution where they were being detained, where it was possible for two or three to verify the results, where it was possible to carry out the treatment in a scientific manner, and have observations properly recorded. That thirteen months does not include all the time that has been consumed in this study, for it required several months of investigation before it was possible to prepare a satisfactory vaccine the organism of which could be properly grown and properly emulsified. This work, too, should be credited to research which, when published, will be known as the William E. Morgan Research.

Dr. William J. Butler:—I was very much interested in the report of Dr. Billings on infections of the urinary and genital tracts. If there is any infection in which vaccine therapy will give brilliant results, it is in infections of the genito-urinary tract. This was early observed, of course, by Wright and has been brilliantly demonstrated by Dr. Billings' report to-night of cases that have been treated. This is so evident that no case of tuberculosis of the urinary tract should be allowed to go without tuberculin treatment. The amelioration of the symptoms and improvement of the patient follow so promptly that the results should be sought for and the tuberculin given to every case of genitourinary tuberculosis and likewise the appropriate vaccine for other infection. The removal of the testicles and other operations for tuberculosis of the

genitourinary tract should be things of the past when we know what tuberculin will do for these cases.

In regard to the vaccine treatment of gonorrhea, Dr. Lespinasse spoke of using enormous doses of vaccine as a diagnostic measure to see if the patients were cured. The doctor failed, however, to note that the local reaction in the use of gonococcus vaccine will be decidedly evident when he uses such large doses in patients who have had gonorrhea, and where they have evidences of a posterior urethritis. Invariably you will get a decided local swelling and tenderness at the point of injection, and the fact that these patients do not have an increase of the discharge can not be taken as evidence that they are cured. We have found the local reaction in both chronic and acute cases of gonorrhea.

As to the vaccine and serum in the treatment of these cases, the principle involved is decidedly different. In using the serum you throw a small quantity of immune serum into the patient to be diluted by two or three or four quarts of blood in contrast to the vaccine in which you are calling into play the immunizing properties of the organism, introducing a sufficient quantity to raise the opsonic index of the entire volume of blood above normal.

In regard to the use of vaccine and serum in infections of the female genitalia, I was rather surprised at the results which Dr. Vail obtained with serum as contrasted with those from vaccine. In the cases of young children which we treated we practically obtained no results whatever with serum, so far as lessening the discharge or reducing the number of gonococci was concerned. In cases we treated with serum for as long as two months and a half without result, the use of vaccine was promptly followed by improvement. In one of these cases under vaccine treatment inside of forty-eight hours the discharge ceased, whereas for seventy-two days it continued under serum treatment. The patient went on to recovery, so far as we expect recoveries in infections of the genitalia in females with the gonococcus. Silver preparations are valueless in the treatment of gonorrhea in the female, so far as I have observed, and they actually delay improvement of the patient. This is also clearly demonstrated to you in hearing this report of various forms of treatment. Patients not treated at all will improve more rapidly than when treated with silver nitrate or with argyrol. It is bad practice to combine argyrol with the vaccine treatment. It is better left out altogether; simply use the vaccine and keep the parts clean.

D. Lespinasse (closing the discussion on his part):—In regard to Dr. Butler's criticism about the local reaction, we get that practically in the cases in which we have an active gonorrhea; but in the chronic cases, where by this method of diagnosis we can determine whether patients are cured or not, we do not get that local reaction.

With regard to Dr. Belfield's criticism, that we can not draw conclusions from the urethra alone as regards the presence or absence of gonococci in the testicles, the prostate, the epididymi, or the vas deferens, all right; but we can get at the vesicle; we can get at the prostate by stripping it, and that was done in all cases that had a demonstrable lesion. If we inject enough vaccine we get an increase in the local symptoms and an increase in the inflammatory manifestations. In the chronic cases, it seems to me, if gonococci are present there, with the large doses of vaccine we give, it ought to light up the infection if present and cause local trouble.

These results are only tentative. So far as I know, for this particular field, no one else has done this work, and I wish some one else would take it up and see what they can accomplish. Personally, I shall continue to work along this line.

Dr. Billings (closing the discussion on his part):—Probably those who have heard the discussion to-night would infer that vaccinations with homologous bacteria obtained from the throat, the bladder or other focal points of the patient are not practical because of the difficulties of making such cultures through the lack of laboratories. This is true, and yet it may be done if one have command of laboratories elsewhere. We have made cultures from the urine of patients as far away as Buffalo and have sent the homologous vaccination to the physician for

treatment of the patient. The urine was withdrawn with cleanly precautions with a catheter and forwarded in a sterile bottle to Chicago. Cultures made from such specimens are satisfactory. We have found, too, that a vaccination prepared from the colon bacillus should be reasonably fresh; not more than two weeks old.

I have had some experience with gonorrheal arthritis. By the way, I think this condition should never be called gonorrheal rheumatism. Rheumatism is a recognized specific infection and should not be used as an adjective or a noun in reference to gonorrhea, tuberculosis, etc.

I have the experience mentioned here to-night to the effect that acute gonorrheal arthritis is not amenable to the treatment by vaccination. In the acute cases and especially if there be suppuration, drainage must be practiced. In the chronic non-suppurating forms the vaccination treatment certainly is of benefit.

For years before the vaccinations were used I practiced the following method in the treatment of gonorrheal arthritis. In most male patients the focus exists in the deep urethra and in the pelvic genital apparatus. One may readily strip the seminal vesicles and the prostate with the finger in the rectum. This procedure results in forcing infected material into the bladder and urethra, and, of course, at the same time must force some of the material into the tissues of the patient. This practically vaccinates the patient, and as evidence of it there is a local and general reaction manifested by a slight rise in temperature with or without a rigor and often by a worse condition of the affected joint. The stripping upon such a patient is repeated every three or four days until there is no longer any secretion to be obtained. One would stain this discharge at all times for the proof of the presence of gonococcus. In some instances a plaster cast was applied to the joint of the patient while under treatment and after the stripping treatment had been completed, the cast was removed and passive motions of the joint begun. Recovery occurred in practically all such patients treated. Without such treatment before vaccination was instituted such patients continued to have a bad joint for an indefinite time; often months and even years, and the final result often was a permanently disabled joint.

#### *JOINT MEETING OF THE CHICAGO MEDICAL SOCIETY AND THE CHICAGO BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.*

A joint meeting of these societies was held March 31, 1909, with Osear Oldberg, Ph.D., president of the American Pharmaceutical Association, in the chair. The general subject for discussion was "The Revision of the Pharmacopeia." Papers were read as follows: "Principles of Revision," by Frank Billings.\* "American and Foreign Pharmacopeias Compared," by W. A. Puckner.\* "How Can We Make the Pharmacopeia More Popular with Physicians?" by Bernard Fantus.\*

#### REMARKS BY THE CHAIRMAN.

The next revision of the Pharmacopeia will probably be more important than any we have had heretofore. Greater interest has been taken in the book than ever before. In times past it has had authority under the common law and by common consent. Now it has authority all through this country by specific law of Congress. Interest, therefore, in the Pharmacopeia is much more widespread and keener. Another reason why I believe that the Pharmacopeia will command greater interest in the next convention for its revision is this, that along with putting the Pharmacopeia up as a standard and authority, Congress also declared that the National Formulary should be the standard for the medicinal substances it contains which are not contained in the Pharmacopeia. This, it seems to me, affords an opportunity to the medical profession and the pharmaceutical profession to draw the line between the Pharmacopeia and the National Formulary, to make the National Formulary more respectable and respected than it ever has been before, and to unload from the Pharmacopeia some of the things it has

\* For text of papers see pages 646, 649 and 656.

been extremely difficult to unload from it in the past. We should consider well whether or not the Pharmacopeia ought to contain any complex mixtures, any therapeutic compounds of any kind. I think it should not. I think the simple, single medicinal substances and rational preparations of them should be in the Pharmacopeia; but when it comes to combinations of remedies, two or more, we are dealing with physicians' prescriptions, and they ought not to be in the Pharmacopeia. If we have to have these combinations for the sake of uniformity, they belong to the National Formulary; but they should not be put in the National Formulary unless the medical profession takes enough interest in that Formulary to participate in its revision.

The Pharmacopeia is published by one authority, but the Formulary is published by an entirely different authority. The medical profession has a voice in the revision of the Pharmacopeia. It has absolutely no voice at present in the National Formulary; but the American Pharmaceutical Association, owning and publishing the National Formulary, has by official action invited the medical profession of the United States to take charge of the Formulary with them and to say what shall or shall not be put in it.

It is true of both the Pharmacopeia and the National Formulary that they contain some things that perhaps ought not to be there. It is certainly true of the National Formulary; but I do not think that the pharmacists ought to be blamed for what is in the National Formulary, even if it does contain such products as mixtures of seven or ten therapeutic agents, for the American Pharmaceutical Association has put in the National Formulary such preparations as a large number of physicians throughout the country have been in the habit of prescribing. So, although the medical profession has not had much to do authoritatively with the National Formulary, still it is what the physicians want, what they use, that has determined the contents of that book. What the medical men will put in the formulary when they take hold of it in a systematic way through their representatives may be something entirely different. I believe the National Formulary will then change its character very materially, and the American Pharmaceutical Association will not only take great pleasure in having the book improved but in seeing a good many things in it expurgated.

It has been extremely pleasing to the pharmacists of the United States to see the great interest now taken by the American Medical Association in the work of revision of the Pharmacopeia and in drug reform. Of the last edition of the Pharmacopeia something over 50,000 copies have been sold. It is unnecessary to remind you how many physicians there are in the United States, how many druggists there are, how many pharmaceutical and medical students we have in this country, who do not buy or use the Pharmacopeia. The Pharmacopeia has not been used to the extent it should be used; but that will be changed by the fact that Congress has seen fit to make it the law of the land. (Applause.)

Professor C. S. N. Hallberg: First, I would like to make a slight correction in Dr. Billings' reference to the make-up of the convention. Having recently read the proceedings of the last convention, I particularly looked into the question of the eligibility of the delegates. The constitution adopted by the convention provides for representation by state medical and pharmaceutical societies only, and medical and pharmaceutical colleges, but not local societies. But the local societies that were represented in the last convention are yet members of the convention and as such are entitled to delegates. There are seventeen local medical and pharmaceutical societies that were represented in the last convention, and these would be entitled to representation in the next convention, and only those. They include the Chicago Medical Society, the New York Academy of Medicine, the Philadelphia County Medical Society and the St. Louis Medical Society. Aside from them, it will only be state medical and pharmaceutical societies, the two national associations and the medical and pharmaceutical colleges that have been in operation for five years prior to the convention. Of course, Dr. Billings did not mean to convey the idea that the Pharmacopeia is not a legalized standard fixed by the government at the present time, as I think most of us got that impression, when he first referred to it, that the Pharmacopeia was not a legal



standard in the sense that it is a legal standard in foreign countries. He undoubtedly meant that such was the case prior to the enactment of the Food and Drugs Act of 1906, with which the Pharmacopeia became recognized, for the first time, by act of Congress as a standard for interstate purposes.

What shall go into the Pharmacopeia and what shall be left out has always been a burning question, and it is very difficult indeed for any committee to decide because when it comes to therapeutics, what one man thinks is absolutely worthless another will say it is the very thing he wants; that he could not get along without it.

I remember at a meeting of the committee right after the last convention some one suggested that emulsion of asafetida was certainly not the thing to be in the Pharmacopeia in these esthetic times, when Dr. Hobart Amory Hare, who is a member of the committee and chairman of the committee on therapeutics, said: "I could not get along without an emulsion of asafetida." Some one said, "How do you take it?" He replied, "I do not take it; I give it in the form of enema." So this is a new point. It seems to me that the committee should endeavor to obtain information throughout the country, as much as possible and practicable, and an effort is being made at the present time to collect statistics on medicines compounded on prescriptions throughout the country.

Then the other question as to whether or not the compound preparations should be put in the Pharmacopeia. It is true that we have what others have not—we have the National Formulary as a sort of supplement to the Pharmacopeia, which has the same legal standard by act of Congress as the Pharmacopeia has, and we might possibly relegate a good many of these so-called polypharmaceutical preparations, shotgun mixtures, or ready-made prescriptions to the National Formulary. But suppose that the Food and Drugs Act is amended so as not to recognize the National Formulary as a standard. Some of the leading members of the National Wholesale Druggists' Association, at its convention last fall, expressed themselves to the effect that it was a great mistake that the National Formulary was recognized in this act. The National Wholesale Druggists' Association and the proprietary associations would like to have the act amended, so as to leave the National Formulary out. While I do not believe it is in the ability of patent medicine men to change the law and leave out the National Formulary, yet it is a little risky to take out of the Pharmacopeia such preparations as paregoric, compound cathartic pills, and preparations of that kind, and put them in the National Formulary. Remember, there are different kinds of physicians, even among the regular legitimate physicians. No doubt Warburg was a great physician. Warburg found that ten grains of quinin sulphate, when administered in a teaspoonful of the old elixir ad longam vitam, prepared from aloes and the other drugs went further than 30 grains of quinin sulphate would in combating fevers in the East Indies, and that is why he administered quinin sulphate in this Warburg's tincture, as it came to be called. There is something in it. Of course, we do not all pay tribute to the idea of secretions and synergisms, and insist that every drug must have some other drug to back it up. But there is something in it. Let any one get up a better combination than the compound cathartic pill. There is not a single one of these drugs that will do the same work that all of them put together will, and a great many physicians have not yet advanced to the modern idea, that we must have simply one drug, perhaps an alkaloid, and have it in tablet form and possibly shoot it in hypodermically, etc. I would call your attention to the preparations we have in the exhibition room. Most of them are mixtures, and I am satisfied they are valuable medicines; that they do the work they are intended to do. They are palatable.

Another point about these preparations is this: It is not practicable, it is not feasible, to make up extemporaneously mixtures like the elixir of iron, quinin and strychnin, or the compound syrup of hypophosphites, or a solution of peptonate of iron and manganese. All these largely used preparations must be made up in quantity, not necessarily by the manufacturers' quantity, but by litre and half litre. Then the retail pharmacist can spend time in making up these prepa-

rations in such a quantity as is desired. The physician might not be able to take time to write out prescriptions with so many ingredients, strychnin, hypophosphites and agents of that kind. These preparations serve a useful purpose. They are just as good preparations as any proprietary medicines that are prepared and put on the market. They are just as nice and serviceable in every respect, and I claim they are a great convenience to the physician. He should prescribe them under the Latin title, so that then the laity would not, for example, ask for Gude's Peptomangan and use it for self-medication. These prescriptions should be written in the Latin titles. Give the pharmacist a chance. Physicians will thus protect themselves and patients will get the benefit. The pharmacist simply works for glory. He gets his reward in the hereafter.

With reference to the suggestion made by Dr. Fantus, that the Pharmacopeia would have to undergo some marked changes, as he stated, the Pharmacopeia is the standard work for identity, purity, strength, and quality of drugs, chemicals and medicines containing formulas for the preparation and compounding of medicines. It does not say anything about therapeutics. When we enter the field of therapeutics we enter a field which is treacherous, and I believe that if an attempt were made, to introduce therapeutics into the Pharmacopeia, the medical authorities as well as physicians generally would object to it. At any rate, it would not appeal to them, because when the Philadelphia school says that gelsemium has killed more people than it has ever saved, what will the people south of the Ohio River say who use gelsemium, and know it is just the thing, or veratrum viride, which is considered such a valuable agent by physicians of the so-called American school? The Cincinnati School of Eclectics believe in the use of American drugs if they can get them, instead of the imported drugs and dyed stuffs from Germany. So I do not believe the Pharmacopeia Committee should endeavor to include therapeutics in the Pharmacopeia. Something might be done, as has been done by the British Pharmacopoeial Committee, which has issued a so-called British Codex. It is called the Imperial Dispensatory, because it comprises most all of the articles used in the various countries belonging to Great Britain, India, Australia, etc., and this British Codex or Imperial Dispensatory is certainly a splendid work. It is gotten up very much on the lines suggested by Dr. Fantus, but it is not of pocket size, and I do not think that you could get very much in a pocket-sized book, although I must say that the extra Pharmacopeia of Martindale and Westcott, which is published in England, is not any larger than pocket size, although it is rather thick, and it contains an immense amount of information, and is certainly one of the very best and most complete works of the kind that has been published in the English language.

I happen to be a member of the Committee on Revision, and with the exception of the president (Professor Oldberg) I am the only one present. So I would like to say that we are certainly very much pleased to hear all the criticisms that can be made on the Pharmacopeia, and we hope any one here who has anything to say will be sure to give his opinion, because it is only through discussion and criticism that the work can approach a high state of perfection. I believe the Pharmacopeia of the United States, with all its shortcomings, is generally accepted to be as good a work as has ever been issued in the English language.

Professor Oscar Oldberg:—In reference to the remark just made by Professor Hallberg, it would be a good thing if a sharp line of distinction were drawn between the Pharmacopeia and the National Formulary, and the polypharmaceutical preparations all put in the National Formulary until we can abolish them entirely. What Professor Hallberg says put a new idea in my mind. It is that it would be a splendid thing to put compound cathartic pills, paregoric and such things in the National Formulary, and then abolish the National Formulary as an authority. I realize that formulas for syrup of hypophosphites and many other things are necessary as they will continue to be used for many years to come. They ought to be in the National Formulary. Other countries have formularies of their own, but these do not have any legal authority. Hence those countries retain in their Pharmacopeias a great many very ridiculous things. I do not blame a well educated man, a physician, who is scientific, learned and con-

scientious, for not respecting a book containing formulas for paregoric, etc. The Pharmacopeia should be a scientific book. It should be nothing else; it should not only be a standard, but a standard that we can respect; but it must be respectable before we can respect it.

Dr. Charles S. Bacon was asked to take part in the discussion. He said:—I came here to listen to this discussion and am hardly prepared to contribute anything of interest.

The remarks of the president, the papers, and the remarks of Professor Hallberg have confirmed my own previous opinion, that this subject is a very complicated one. I have had the idea, which still remains, after Professor Hallberg's remarks, that the National Formulary, which is the work of the American Pharmaceutical Association, is really the book that is of most interest to the physicians, while the Pharmacopeia, which is specially prepared by physicians, or about which physicians have as much to say as others, is of especial value to the pharmacist. There is no doubt, in my judgment, that it will be of great value to the medical profession, if they had considerable voice in the preparation of the contents of the National Formulary. Yet, after all, the National Formulary does not exactly meet all of our wants, and I believe that what Professor Fantus has said is pertinent, that physicians need such a book as he has described. It is true, we have in the National Dispensatories a large part of the information we ask for, but those are enormous in size, and contain a good deal more than we need. They are expensive, and consequently do not meet our wants in every respect. Moreover, they are not official. They are not prepared in a way to give them the authority they should have. If there were some way of getting out an authoritative pharmacopeia, or whatever name is given to it, it would be of very great value to the medical profession.

One other subject that interests me is that of nomenclature, and especially the nomenclature of the new preparations—synthetic products. Some of these must be incorporated in the Pharmacopeia, as their value is recognized. It becomes quite a serious question as to the naming of them. A name that has been patented or used in the patenting of an article, according to the rules of the Patent Office, is the common name of the article and can not be used as a trademark, and when a substance or agent has been described under a certain name, and that name has become popular, the people have a right to it, and that name can not be trade-marked. You know the manufacturers try to get around this ruling by describing the article under its chemical name as the name, and thus preserving their proprietary name for the trade-mark. But this is an evasion of the intent of the law. How that is to be overcome I do not know; but until some satisfactory decision is reached we should agree that those names artificially given are not desirable and that the chemical name, or some modification of the chemical name, should be the real name. I believe our policy should be to avoid the advertising of names that can not be of general use. I believe it is unfair to the medical profession, because patent and trademark laws are made for the good of the community. They are made to favor the advancement of science and the useful arts, and not to benefit any particular set of individuals. Articles are patented for the benefit of the arts. The law should not be made a means of injuring advance in the useful arts in the way it is at present.

Dr. H. B. Hemenway, of Evanston:—The remarks of Dr. Bacon remind me that there should be some change in the laws relative to copyright. There should be no such thing as a copyrighted name issued on some previously known drug. Hexamethylenamin, as we know it in the Pharmacopeia, should never receive the copyrighted name of aminoforn, formin, or nrotropin. Such a style of copyright should be prevented by a change in the copyright law.

I fully agree with what the chairman said relative to the advisability of having two books, one for pure drugs and the other for mixtures. Professor Fantus' suggestion relative to the need of having in the Pharmacopeia a short official statement of the physiological action is valuable. We find widely conflicting statements relative particularly to the newer drugs. Great efficiency is claimed, and there is no standard that is recognized in this country. The only body we

have to take up this matter now is the Council on Pharmacy of the American Medical Association. It seems to me the Pharmacopeia which deals with simple drugs should also give the physiological action.

One thing more. The suggestion that has been made that there be some method of standardization by tests of the action of drugs upon the living animal, is a wise one, and these should be incorporated in the Pharmacopeia.

Here is another point I have in mind: A drug like digitalis made up of fresh leaves to-day may be all right. It may be entirely safe. It may be perfectly efficient. In a tincture which has stood upon the shelves for five years perhaps—and sometimes I fear they stand as long or even longer than that—we should not find full strength. Perhaps we might find it in another action of the drug. There should be also this protection in the use of drugs from the store, a protection which could be thrown about it by enabling us to have not only a test of the original composition, or the origin of the drug, but a test as to its final efficiency. That test should be of some value. I have seen drugs dispensed when I knew to a certainty that there could not be efficient action. The use of drugs of uncertain age, hence of uncertain efficiency, is partially to be blamed for skepticism as to the general value of medicines.

Professor Oscar Oldberg:—I would like to emphasize one thing Professor Puckner referred to in his paper. We have come to an entirely new understanding of the principles governing the introduction of new things into the Pharmacopeia. We do not have to depend entirely upon the testimony of those who have tried medicines and said they have found them good. We can do better than that. We know more about the relation of the composition of medicinal agents to their physiological and therapeutic action than ever before. That knowledge should be utilized. It is true, as Professor Puckner says, there are many substances altogether new, but which nevertheless promise to be useful, and physicians would like to try them. These new remedies should be put in the Pharmacopeia. Moreover, I can mention at least some substances not new which should not be kept out of the Pharmacopeia as they are. They are excluded solely because we do not happen to know their source. There is *coto bark*. Many physicians use it. It is a valuable agent. It is not put in the Pharmacopeia because we do not know the tree the bark is from. That is, in my judgment, the best reason for putting it in. If physicians wish to use it, they want to do so under the best possible conditions. They want a description of it, so that pharmacists can identify it from the official description and know that it is *coto bark*. But when we have no accessible authority to be guided by, false drugs may be used. With regard to untried but promising remedies, I would think that they should be officially recognized. When *convallaria* was first brought into use one physician tried a 5 per cent., another a 10 per cent., another physician a 20 per cent. tincture of it. Why? Because it was not in the Pharmacopeia. He had no formula for any tincture of it. The strength was not known or fixed upon. One physician would use the whole plant, and the other the rhizome. The best of drugs would be discarded if the physicians using them obtain widely discrepant results from their use. We should see to it that the same thing is tried by all. That is one of the uses of the Pharmacopeia. The ultra-conservative notion, that we ought to try drugs for fifteen or twenty-five years before we put them in the Pharmacopeia is obsolete. No such notion should prevail. New things should go into the Pharmacopeia if their composition and character warrant their trial. We should be told what is known about these drugs in the Pharmacopeia; then they can be tried with some sort of promise of uniform results such as will lead to correct final conclusions.

As to the nomenclature of the Pharmacopeia, we hear very often that the titles are referred to as being given in Latin. The vast majority of the so-called Latin titles of things in the Pharmacopeia have nothing to do with Latin except in mere appearance. We must have technical names, but whether these are English or Latin does not make any difference. But we can not use such long names as hexamethylenetetramine, as it was called when first put in the Pharmacopeia. We have dropped the "tetra" but the name is still too long. Such names are not



practical. There are those who write a prescription for this agent under the name "hexa"! We want brief titles, but they should be technical, and there should be inventive genius enough available to give us these titles.

Professor Puckner says that the physicians are the ones to tell us what to put in the Pharmacopeia. I do not agree with him altogether. While physicians are qualified to practice medicine and are licensed to do so, they are not always competent to determine what things shall go into the Pharmacopeia. I guess you will all admit that each practitioner of medicine has his own limited armamentarium of remedies. Some physicians use but a few. Some other physicians may not use the same remedies. One physician, who has an extensive practice, may not use much over fifty drugs; but we have a thousand things in the Pharmacopeia. Show me the physician who uses all of them. Let us put in the Pharmacopeia what is used. We must find out not from the few delegates whom the medical associations and medical schools send to the convention, but we must find out in a better way than that what drugs are important enough to be put in the Pharmacopeia. In the Pharmacopeial Convention of 1880 half of the members of the committee were physicians, and they could not tell what drugs were generally used. They could tell what they used themselves. We got more information from the pharmacists, because the pharmacist who does an active business can tell what twenty or thirty physicians are using. But even that is not sufficient. The manufacturers of pharmaceutical preparations know more about it. But when a plant drug is considered we want to find out whether there is anything contained in it that justifies the belief that it may be valuable.

The French Pharmacopeia has been referred to. It contains more medicines than any other book, so far as I know. I imagine the reason for it is that the Secretary of Agriculture has something to do with the appointment of the commission. But a Pharmacopeia is nothing but a book of standards; it should not be an authority on therapeutics. It should not and can not be so, in the nature of things. The fact that you find a certain drug in the Pharmacopeia should not be regarded as conclusive evidence of its value, and if you fail to find any particular substance in the Pharmacopeia, its absence should not be held to prove that it is not good.

Dr. Joseph A. Capps:—One of the great stumbling blocks to physicians making free use of the Pharmacopeia and National Formulary, I believe, is the lack of a definite differentiation of the preparations in these two books. If a physician wants to look up an elixir or mixture or syrup, he does not know whether to open the National Formulary or the Pharmacopeia. If there were some sharp line of cleavage between these volumes it would be of great benefit to the physician. If the simple drugs, with all that pertains to their composition, their chemical and physical characteristics, were put in the Pharmacopeia, and if all combinations were put in the National Formulary we would know which volume to use. In other words, if a physician could look upon the National Formulary as a book of prescriptions, of combinations of drugs which have proven serviceable, then he would learn to use those that seem valuable or promising.

In regard to the suggestion that experimental results in the use of drugs and the therapeutics of various preparations be incorporated in the official books, I would express my dissent. They should be left out of the official books, because we already have our *materia medicas* and our therapeutics. In these we can get the most recent physiological and therapeutical results of investigators. The time that is taken to prepare official books like the National Formulary and the Pharmacopeia is very long, and during this period many new discoveries are made and many errors corrected; whereas, one can purchase a fairly recent book on therapeutics, giving up-to-date information. A book like that of Cushny's, on "The Therapeutic Action of Drugs," would be much better than an official book written ten years ago, no matter how reliable the authors of the latter might be.

One other point; there are many physicians who do not like to see incorporated in the Pharmacopeia preparations which are evident imitations of nostrums exploited by proprietary houses. It seems to me that there is no need for such a course. It is far from dignified to be copying proprietary houses in the prepara-

tion of our prescriptions. One of the most conspicuous examples of this is the *Pulvis Acetanilidi Compositus*, which, as you know, is an imitation of anti-kamnia, and other headache powders. By the way, the *Pharmacopeia* follows the error which is so generally criticised in the proprietary headache powders of giving too large a dose of acetanilid, that is, half a dram, or seven and a half grains, whereas physicians very seldom prescribe more than five grains. It is to be hoped that the revisers will be more independent of the nostrum makers in future editions.

Dr. E. E. Hyde:—I have been expecting some one to suggest that the National Formulary and the *Pharmacopeia* be consolidated. It would be an excellent plan to have the first part of the book contain the simple drugs and the second part compositions or compounds. You may say that the latter would be an appendix to assist one who needs help in prescribing. That is not a fair statement, however, as it is desired to have standards established for many compounds. For the same reason we now have them in the National Formulary.

As to nomenclature, manufacturers have no hesitation in making new and short names for the products they desire physicians to use. They do not indulge in long, difficult titles. They are too prone to give names which will suggest the purposes for which the remedies are to be used; but at least they give us names that are short and easily remembered. Have we not the power to create easily remembered names for some of these substances that we want to have every doctor prescribe by official titles? You may say that this would favor the use of such substances by the laity and would also be catering to the poorly educated doctor who is unable to remember long chemical names. You can take your choice. I merely offer the suggestion of the short name in answer to the man who says that we can not expect physicians to prescribe this or that drug by its long name. If that be the case, let the man who can remember the long name prescribe it by that name, and create a brief official name for others to use. Take, as an example, "hexamethylenamin" and make "hexamin." This would certainly be easily remembered.

Mr. H. P. Sandkoetter:—I heard it mentioned by Dr. Capps that the National Formulary has nothing but the proprietary preparations in it that are on the market. I claim it is simply bringing order out of chaos to take, for instance, elixir terpin hydrate and give it its proper place. Twenty years ago it was in vogue, and perhaps longer than that; one manufacturer after another exploited elixir terpin hydrate and accordingly we are obliged to carry as many bottles of plain elixir as we have manufacturers exploiting it to physicians. The same is true of those containing heroin, codein and other medication; in most cases it means twenty or more bottles of elixir terpin hydrate and combination when the three official preparations will adequately replace them all. When a physician asks a pharmacist to carry such a duplicate of stock it is enough to make an honest man dishonest and substitution is little to be wondered at. Imagine the amount of capital invested here, much of it idle capital. With these manufactured articles how are we to know the condition of our stock, not knowing the composition.

Another point occurs to me is in reference to nomenclature. Let us take hexamethylenamin. The word itself is a chemical index of what the article is—under its various trade names it is known as urotropin, aminoform, hexamin, cystogen, etc. It is a well known fact that these have been used one after another, not knowing they are all the same. Had the physician confined himself to the *pharmacopeia* it would have been necessary to try the same thing under all its names without giving up. You see this is medicine going wild. A word in defence of long names. If they are hard for the physician they must be impossible to the laity, and that will put a stop to self-medication. Furthermore, the physician only needs to familiarize himself with the ones he uses, and that ought to be easier than remembering the names in anatomy. Remember, hexamethylenamin is of standard purity and composition: you have not the same assurance by using the other names.

When it comes to the preparation of such a book as Dr. Fantus speaks of, it must be admitted that the present Pharmacopeia does not contain the information the doctor is interested in, and I think a book based on the U. S. P., containing reliable information, is absolutely necessary. Let us take liquor cresolis. The only information obtainable is off a lysol bottle, which is bound to be biased.

I think Dr. Fantus' idea of giving to physicians the information he mentions is very valuable; it will bring the physician back to first principles in medicine. It will give him reliable data on articles of the Pharmacopeia, and he will know just where to find it. Dr. Capps says this information can now be had in some works, but there is probably no one book containing the information on all articles of the U. S. P. The book Dr. Fantus refers to should be officially or semi-officially recognized, and perhaps the body that meets to revise the U. S. P. could formulate a place to have a special physicians' pharmacopeia prepared.

I think it is also a good idea to put the simples in one part and the preparations in another, instead of having two books as at present, the N. F. and U. S. P. It is not a good plan, however, to eliminate the National Formulary because it is the forerunner of many preparations which in the interim of ten years are found valuable to the medical profession. Preparations that have been found important and valuable as therapeutic agents should be brought before the medical profession in some way after the Pharmacopeia is finished; they should be introduced in the National Formulary, and from here the committee on the revision of the Pharmacopeia can take them up if found of sufficient importance. In this way medicine and pharmacy can be kept up to date.

Dr. Charles A. Parker:—My sympathies are with the gentlemen who desire more important information on the actual value of drugs. It has been stated here that this is not the proper place to put that information, yet we are accumulating through our committee on chemistry of the American Medical Association a considerable amount of valuable material. Recently collargol has been considered very carefully in an article. It seems to me we should have some kind of repository for that kind of material, and that we should strive to attain that state of perfection of which Professor Hallberg spoke, that is, finding out the actual and real value of things and putting them down systematically. There should be some arrangement made looking toward that end in view. A number of persons have expressed that idea, and as there seems to be a demand for it it is well worthy of consideration.

Mr. T. H. Potts:—I have been an attentive listener to this discussion on the practice of medicine and pharmacy in this progressive age. My mind is carried back to the time when we had no proprietary pharmaceutical preparations. It was not a great many years ago. The Pharmacopeia was not talked about so much then as now. Physicians in practice were thoroughly familiar with the *materia medica*, but if they wanted practical information they went to the retail druggists and pharmacists, asked for it, and got it.

From a commercial point of view, and speaking about propaganda work, we are much interested in this subject. It seems in some respects like the restoration of medicine as well as pharmacy back to its primary condition. There is no doubt, gentlemen, but what this promiscuous prescribing of proprietary remedies has done a great deal of harm, in that it has not promoted the ability or the advancement of the pharmacist. I came from a section in the east where, in a certain store, we did a large prescription business, and there we had one of the prevailing evils to contend with which Dr. Sandkoetter spoke about. It was almost impossible for retail druggists to be honest in the compounding of prescriptions.

A doctor would order, for instance, a compound cathartic pill, McKesson & Robbins. Now, it is absurd to think that we can always give this particular compound cathartic pill, because we had Warner's, Parke, Davis & Company's and half a dozen others in stock. What is the retail druggist to do in such a case? Should he give the prescription back to the patient and say, "No, I have not got this article," or give some other preparation that he knows is just as good.

Coming down to fundamental principles, when I was a young man we made these things in the store, and if a doctor ordered a pill cathartic compound it was made on the spot, and the doctor got results, which he often fails to get now. What applies to that likewise applies to other pharmaceutical proprietaries.

There is no question but what the propaganda work we are interested in is one of the greatest things we have ever had in medicine. At the meetings of doctors and druggists I have always stood up for the physician, claiming he was pre-eminent. I have maintained that it was the druggist who should study the interests of the doctor, and that if there was any doubt about a certain prescription or preparation he should get into communication with the doctor as soon as possible. If the case was urgent he should recommend what he had as a substitute or send the prescription to some other store to be filled where he could get the preparation prescribed, not failing to draw the particular attention of the doctor to what he had done.

Going back again to the pharmacist, there is not a man here but what knows that pharmacists in the last fifteen years have been considered men of some learning. They are men of some standing. The pharmacist must be a thorough student in pharmacy, in chemistry, and in materia medica. He has to know and does know his business. Let us consider that from fifty to seventy-five per cent. of the prescriptions call for proprietary remedies, and I doubt very much whether any one knows their composition except the man or men who make them. This reprehensible practice is enough to make an honest man dishonest. It forces the pharmacist to substitute and thereby prostitute his calling. We are trying to educate the retail druggist to recognize the physician, to recognize the fact that the physician is presumed to know what he is about when he prescribes a remedy, and under no circumstances should a substitute be used without first obtaining the consent of the prescriber. He should give him the best he knows how. That is what we are trying to educate the retail druggists of the country to do, and we are depending upon the physician to help us out.

It is not too much to say that in the near past the practicing physician has been somewhat lax in his proper censorship of the compounding of his prescriptions. If he is aware of any discrepancies such as base substitution and criticism of his prescription, it is his duty to visit and inform the pharmacist personally and severely condemn such actions. Let us get together more often, and each in his turn can learn something to his mutual advantage.

Dr. Frank Billings:—I would like to ask Prof. Hallberg whether it is possible under the new pure food law to make the Pharmacopeia official, that we should have standardized drugs under government investigation, just as we may have pure food? May we have a standardized tincture of digitalis, aconite, and so on?

Professor Hallberg:—Yes, physiologically standardized.

Dr. Billings:—That is one of the most important things we should ask of the Committee on Revision to see that it is carried out. The primary fault with us physicians is that we have advanced so rapidly in the science of medicine, so called, in our laboratory work, and in the investigation of the cause or causes of disease, that so far as drug treatment goes, medical schools have ceased to teach pharmacology as they formerly did and should do. The result is we have turned out for many years men who know practically nothing about pharmacology. In the school with which I am connected I have fought for years for pharmacology to be taught, and, so far as I am able, I teach students therapeutics or the application of drugs by giving clinics along therapeutic lines. I find that there are many students in our clinical work who have not been taught pharmacology; they know very little about drugs, their physiologic action, or about the writing of prescriptions. The result has been that while medicine has been advanced immensely from the scientific side, it has ceased to become as practical as it was. There was an abuse in drug-giving in former days, without knowing what the cause of the disease was, or just what the drug is. No greater evil, in my judgment, arose than when we ceased to teach students pharmacology, to make them prescribe rationally, and allowed them to go out and practice medicine and make use largely of proprietary remedies.



I believe the Pharmacopeia should be and stand for just what it was originally intended, a book of standards of drugs that go into it; yet I would not want to see thrown out of it our old standards. Paregoric, for instance, is a mixture I can not write, and yet when I was taught materia medica I could repeat everything in connection with paregoric and every other compound in the materia medica. That is something that is simple and should be there. I would take out some things that are in the Pharmacopeia. For instance, in this day it does not seem to me that we should use lard as an ointment. Petroleum and a little paraffin added will make a better base than lard itself. I do not see any reason why lard should be used. Some of these compounds should be taken out.

In a large practice, scarcely a week passes that we do not have someone who has been chronically poisoned by acetanilid, with all degrees of heart failure or myocarditis, and even insanity. I have had to put people in an asylum from the habitual use of acetanilid. There are plenty of other drugs people can use without it. As a member of the Revision Committee, I want to see acetanilid cut out. There are some other poisons that ought to be eliminated from the Pharmacopeia.

As to nomenclature, it is not hard to write some of these long names. I write hexamethylenamin, and do it. (Applause.) Within three weeks I wrote it, and shortly after saw the box that came from the druggist, and for some reason the druggist wrote on it "Cystogen." I do not know why.

Then there are some things that are patented, and we have got to be rational and reasonable about things that are good, and we should not discard their use because some men have found a method of making this or that. There is a difference between a copyrighted mixture and a patented article. A patent is not a secret. A patent is a certain process which the government recognizes as belonging to an individual, and every patent remedy we have has not a patented name; it is the process of making the drug which is patented.

I do not know how the rest of you feel about it, but I find that adrenalin chlorid, the process of making which is patented, is a drug I can not get along without. It is a good and valuable drug. I use it practically every day. I do not say because it is patented it is not good for anything. Parke, Davis & Company have bought the process, and I understand it will be good for them for twenty years. Any one of you can go to Washington and find out how it is made, but you can not make it. That is a different thing from the proprietary copyrighted name of a mixture.

I am not altogether in love with the National Formulary. I wish half of it were wiped out.

As to mixtures, we all have our favorite prescriptions. Nevertheless, there are lots of these things that are necessary. If I were a druggist I would keep all of these different things. We doctors know that disease does not express itself in the same way in different individuals, and how in heaven's name can we prescribe the same mixture for a man as for a woman, or for a child, because either one happens to suffer from the same disease? And yet many physicians are prescribing the same thing for men, women and children indiscriminately.

Most of the National Formulary is not necessary, just because the proprietary manufacturers all over the country are flooding the country with different remedies, so that if all of them were incorporated in the National Formulary we would have a book as large as Webster's Dictionary. That is what it will be in size if we keep on adding to it.

I want to see the Pharmacopeia contain official standardized drugs, indicating the purity of drugs, indicating their physical properties, and also say what a leaf of digitalis shall contain to be right. Then we will have some use for it.

As to the suggestion of Dr. Fantus, it is a good one, because Dr. Fantus recognizes the evil of which I am speaking. He wants to get up a Pharmacology that will contain a list of drugs, with their physiologic action, the dosage, and the indications for their practical use. I wish he would get it up. He ought to get up such a book as that. Such a book ought to sell all over the country, and it will not only prove valuable, but be the means of correcting a lot of these evils.

Dr. Fantus (closing the discussion on his part):—I am afraid I have been a little misunderstand in regard to what I said concerning a physician's Pharmacopeia. I did not intend that it should include a dissertation on the action and uses of drugs. I am aware of the fact that our knowledge of these is constantly growing, and therefore changing, and it is almost impossible to have an official book on these various matters at the present time. But a standard book that I believe the physician needs and that could be issued officially would include things that are quite generally agreed upon, or could be quite generally agreed upon, and that the physician wants to know to prescribe a drug that he has not prescribed before, or with his administration of which he is not satisfied. Cushny's book, which has been mentioned, gives the action and uses of drugs, but it is practically silent on the things that one needs to know in order to be able to prescribe intelligently; and it is information along that line, which, so far as I know, no book gives in a systematic manner, that should be gotten up in an authoritative manner. I have tried to get up such a list of official drugs in the little book I composed on "Pharmacy and Prescription Writing," but I found myself handicapped by not knowing everything I wish to know. I am sure that there are a dozen or two dozen better heads than mine capable of doing this work, and that would be able by combined effort to produce a better reference book for the use of physicians than any one person can. Especially the best method of administration of drugs is a very important subject, and one which only practical experience can decide, and which would be very much better decided upon by a number of people than by one. Personally, I feel unable to prepare such a book alone.

Professor Puckner (closing the discussion):—There are one or two points I wish to speak of. In reply to the remarks of Dr. Billings: The Pharmacopeia has laid down chemical standards for a great many drugs and preparations, and the efficiency of these may therefore be determined at any time. I do not think there is the least doubt but what the next revision will adopt physiological standards for those drugs which can not be standardized chemically.

In reply to Dr. Hemenway in regard to old drugs: Those that are standardized, the Pharmacopeia requires that they are up to standard when dispensed. If digitalis, for instance, were standardized physiologically it must comply with that standard when it is dispensed.

The question of the deterioration of drugs has been studied only recently, and it has been determined that the fluid extract of digitalis deteriorates at the rate of 10 per cent. a year, so that we are beginning to know something about the keeping qualities of drugs.

With reference to the question of names, I have no doubt that the word hexamethylenamin may be abbreviated, a shorter name used, and still be scientific. One objection would be made is that all possible combination of words of this sort are copyrighted. For instance, somebody has suggested hexamin. There is a United States trade-mark on that name.

I have no doubt that if these names were fought in the courts the trade-marks would not hold. If the Committee on Revision of the Pharmacopeia fought these names as trade-marks, I believe fully 75 per cent. of the trade-marked names and trade-marked medicines that are used would be held illegal. The names are descriptive and can therefore not be trade-marked.

I believe physicians should have their say as to what drugs should go into the Pharmacopeia. The physicians are accused by the National Formulary Committee of wanting elixir digestivum incorporated in it. To that extent I do not believe physicians should be humored. I think it should be the province of the Committee on the Admission of Drugs to decide whether drugs are of value and whether or not they should be admitted. In the first place, the drug should be defined as far as its chemistry is concerned. We should know what it is. Its pharmacologic action should be studied, and only those drugs found of value should be included. So I think elixir digestivum should not be admitted, no matter how many physicians want it.

## ENGLEWOOD BRANCH.

At the January meeting of the Englewood Branch the following papers were presented in the symposium, "The Eye in General Medicine:"

THE EYE IN RELATION TO DISEASES OF THE BLOOD AND VASCULAR SYSTEMS, THE ALBUMINURIAS AND THE SO-CALLED CONSTITUTIONAL DISORDERS.

ALEXANDER P. HORWITZ, M.D.

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CHICAGO.

The facts that the central artery of the retina is a branch of the ophthalmic, which, in turn, arises directly from the internal carotid; that the ophthalmic veins which drain the eyeball and orbit, besides their large communicating branch with the facial vein, empty intracranially into the cavernous sinus; also, that the perineural sheaths of the optic nerve are a direct continuation of the membranes covering the brain and the space between them a direct continuation of the subarachnoid space, make apparent at a glance the close relations existing between the contents of the orbital cavity and those diseases which either directly or indirectly affect the cardiovascular and the lymphatic systems.

The central artery of the retina is an end artery in its truest sense. On account of the clearness with which it and its accompanying veins can be seen, we can recognize not only marked changes in the color, composition or tension in the blood current but it is here that we frequently see, long before we can detect them elsewhere, pathological changes in the vascular organs themselves.

In the following remarks I will endeavor to bring out those points which you will find of diagnostic value and which you can with a little patience easily learn to recognize.

THE ACUTE AND CHRONIC HEMORRHAGES.

(Severe epistaxis, post-partum hemorrhage; melena, hematuria, severe hemoptysis, etc.).

In the milder cases of the acute, but especially in the chronic hemorrhages, we have only the symptoms of secondary anemia, i. e., weakening of the muscles of accommodation and convergence with the resulting symptoms of ocular asthenopia (ocular headaches, blurring of vision on near work, tired feeling in lids, black spots before the eyes, etc.). The severer hemorrhages are often followed by a distinct decrease in the amount of vision (amblyopia). This may not appear until some time, weeks or even months, and denotes atrophy of the optic nerve resulting from a sudden disturbance in the nutrition of the opticus and retina, which leads to a necrobiosis. Other cases may be preceded by a retrobulbar neuritis due to hemorrhage into the optic nerve by the rupture of a previously diseased blood vessel. This is accompanied by whitish patches of exudate, small retinal hemorrhages and signs of stasis in the papilla. These amblyopias frequently result in complete blindness and the possibility of their occurrence should always be borne in mind.

CHLOROSIS.

Apart from the symptoms of exhaustion, slight grades of chlorosis produce no striking changes in the eye. The conjunctiva is often congested and the lids sometimes edematous. In very severe cases there may be visible pulsation of the retinal arteries, confined as a rule to the optic papilla. This is due to the diminution of the arterial pressure. Other changes which may be present but are infrequent are: a pale disk and narrow vessels filled with light colored blood, retinitis or neuroretinitis, and hemorrhages. Several observers (Knies, Wood) have observed a stellate arrangement of whitish patches around the macula resembling albuminuric retinitis. This is usually unilateral and only temporary, disappearing on treatment.

## HEMOPHILIA.

Presents nothing outside of spontaneous hemorrhages in the lids, conjunctiva, etc., with the secondary results as stated before.

## PERNICIOUS ANEMIA.

Is characterized by multiple retinal hemorrhages.

## LEUKEMIA.

Here we have two kinds of retinitis, one accompanied by minute hemorrhages and one by white patches. The former is the more frequent. The retina itself may be normal or more or less cloudy, occasionally milky and strewn with hemorrhages. There are visible vessel changes, as dilatation and sinuosity, advanced fatty degeneration and sclerosis. The chorioid may present the same changes. The fundus may be red, yellow or pale. The papilla may present various inflammatory changes or infiltration. Leukemic neoplasms may occur in the lids and orbit, and also within the eye or brain and give corresponding tumor symptoms.

## POLYCYTHEMIA.

Is, according to Uhthoff, characterized by a deeply red fundus with tortuous, beady and much dilated veins. The arteries are somewhat darker and wider than normal. There are no other retinal changes, hemorrhages, etc. The lids are cyanotic. In all other respects the eye is normal. Uhthoff considers the fundus findings of great diagnostic value in conjunction with the blood and general findings.

## DISORDERS OF THE CARDIOVASCULAR SYSTEM.

In disorders of the circulation we frequently notice visible pulsation of the retinal vessels not alone confined to the papilla, as in the physiological venous pulse, but often extending far toward the periphery of the retina. In aortic insufficiency there is almost constantly a pulsation of the retinal arteries, synchronous with the radial pulse and alternating with enlargement of the veins. But this may be absent especially when the insufficiency is combined with an appreciable amount of stenosis, or it is absent during rest and appears when the heart's action is increased. It may disappear under the influence of digitalis. A similar condition is observed but very rarely in other cardiac diseases. It may be found occasionally in Basedow's disease and in extreme anemia and chlorosis. We sometimes see, corresponding to the capillary pulse of the finger nail, an alternate reddening and pallor of the optic papilla.

In the last stages of valvular diseases, the incompetency which causes cyanosis, congestion and edema generally, affects the retinal vessels and we have corresponding congestion, hemorrhages, etc., in the eye. In fatty heart there is frequently extensive disease of the vessels which gives rise to ocular hemorrhages. Temporary disturbances of circulation often cause cerebral disorder of vision, as complete or partial blindness with intact reaction of the pupils. In these cases the prognosis is generally favorable.

Extensive disease of the blood vessels, especially atheroma, arteriosclerosis, fatty degeneration and certain specific diseases such as syphilis, albuminuria, leukemia and chronic infections and poisons, produce ocular symptoms either directly in the eye or indirectly through the brain. To detect these vessel changes requires often the expert use of the ophthalmoscope, but they are seen less rarely than is generally supposed. In these cases the walls of the arteries and veins have a white border (periarteritis and periphlebitis); in places they are thickened into a spindle shape. The walls contain yellowish, fatty patches, especially upon the papilla. Diminution of the blood pressure is indicated by narrow arteries and sometimes pulsation. Further along in the disease the arteries may even become obliterated. These same processes take place more extensively in the chorioid. More striking than these diseases of the vessels are their results—the hemorrhages. These take place most frequently in the conjunctiva, retina and vitreous, either spontaneously or upon the slightest exertion, such as coughing,



bending, etc. Relapses are very common, and as these hemorrhages are only a local manifestation of a general process they are often the forerunners of cerebral hemorrhage. Hence the prognosis is generally unfavorable. Atheroma in old people is frequently the cause of glaucoma (Fuchs) and similar disease of the internal carotid or ophthalmic arteries can by pressure upon the optic nerve in its course, give rise to optic atrophy.

Aneurism of the aorta or innominate gives rise to vasomotor and pupillary sympathetic symptoms on the corresponding side. Initial irritative symptoms such as mydriasis and exophthalmus, later give place to paralytic symptoms, as myosis, enophthalmus and ptosis. We may have retinal pulsations and, if the optic nerve is involved, neuritis or choked disk. Aneurism of the internal carotid may grow toward the orbit and produce the symptoms of pulsating exophthalmus although the latter is usually the result of traumatic aneurisma arterio-venosum within the cavernous sinus.

Diseases of the heart and blood vessels may also give rise to thrombosis and embolism in the eye. If the embolus is infected we have a resulting inflammation and suppuration, as, for instance, from an ulcerative endocarditis or from the ordinary infectious diseases. Small emboli consisting principally of micro-organisms may be, in the course of an acute or chronic infectious disease, carried to all parts of the eye, even through the finest capillaries. In the larger blood vessels of the ciliary body and of the chorioid we find not only emboli of pathological micro-organisms but metastasis of malignant tumors, carcinomata and sarcomata. Carcinoma of the breast frequently leads to intraocular metastatic growths. (Description of Uhthoff's case.) These appear as whitish tumefactions of varied shape and size lying beneath the retinal vessels, the latter indicating their chorioidal location. The effect of non-infectious emboli and thrombi varies as to their location. If in the chorioid, very little damage results on account of the free anastomosis. If however, the embolus lodges in the retinal artery or in one of its branches the consequences are serious as, except a few small anastomoses around the papilla and at the macula, this is an end artery.

If the embolus lodges in the main trunk of the retinal artery we have a sudden onset of blindness. On examination we find the papilla pale, the arteries empty and the veins narrow. Soon the retina becomes opaque and milky, only at the fovea centralis we have a red field remaining, the so-called "cherry spot." If the circulation is not restored by anastomosis within a few days, the papilla becomes atrophic and the arteries degenerate into fibrous cords.

In embolism of a branch of the central artery the changes above described are limited to the area whose blood supply has been interrupted. There is only partial blindness in the field of vision. The location of the embolus, together with the area of degeneration with its multiple hemorrhages, can be distinctly seen. Of the intracranial vascular affections the ocular findings correspond to the rules of cerebral localization. In brain hemorrhage and embolism we must depend as a rule upon our general clinical symptoms, and I leave this to the gentleman who is discussing this subject from the neurological standpoint.

I wish to call attention at this point to a very common affection—thrombosis of the cavernous sinus. This may be non-infectious (marantic thrombosis) or infectious (usually following earies of the petrous portion of the temporal bone in suppurative otitis media). We have here usually also the symptoms of cerebral abscess, together with those of suppuration of the orbital cavity, i. e., swelling of the lids, protrusion and immobility of the eye, dilated and rigid pupil, blindness, insensibility of conjunctiva and cornea, ulceration of cornea, suppuration of eye, etc.

The ophthalmoscopic appearances become very pronounced as soon as the thrombus extends to the ophthalmic vein, previous to that they vary considerably. We have then intense venous stasis with dilated and tortuous veins and multiple hemorrhages. The papilla is reddened but not much swollen. In non-infectious

thrombosis of the lateral sinus we have, together with the general cerebral, also basilar symptoms, viz., paralysis of the oculomotor nerves which pass near the sinus; wide dilated pupils, insensibility of cornea and impairment of vision or blindness due to disturbances of function of the optic nerve.

*Edema of the lids and protrusion of the eyeball indicate that the process is located in the vicinity of the orbital cavity.* Although meningitis is often accompanied by venous congestion and an optic neuritis, the *marked stasis* which occurs in thrombosis of the sinus with thrombosis of the ophthalmic vein, is never observed and, therefore, is a valuable differential diagnostic point.

Disturbances of the lymphatic circulation of interest to us are two: hydrocephalus and glaucoma.

Both congenital and the chronic acquired hydrocephalus are accompanied by a narrowing of the orbital cavity and a downward protrusion of the eyeball. The lower lid thus partly covers the cornea, while the sclera of the upper part of the eye is exposed. Occasionally the eye is abnormally small (microphthalmus). In all forms there is pressure paralysis of the external eye muscles, especially the external rectus. Uhthoff in one-third of his cases found convergent strabismus. We may have nystagmus. The pupillary symptoms vary—rigidity being the most common. Fundus changes are present in the majority of the cases. They are chiefly choked disk, optic neuritis or optic atrophy. In 10 per cent. of Uhthoff's cases there were disturbances of vision without pathological fundus findings. Two-thirds of these were improved by withdrawing cerebrospinal fluid. The exophthalmus serves to differentiate this disease from meningitis serosa. In children especially we must differentiate an exophthalmus from an abnormally large eyeball.

Glaucoma is increase of tension within the eye due to a local lymphatic disturbance. When this takes place in a small child where the sclera is still soft, the sclera and other coats of the eye stretch and we have an abnormally large eye. This condition is called buphthalmus or ox-eye. It can be recognized by the increased hardness of the eyeball; the enlarged cornea; the deep anterior chamber; the fluttering iris and the glaucomatous cupping of the optic papilla. I have such a specimen here to-night. (Specimen.)

#### ALBUMINURIA.

In about 10 per cent of renal and other diseases in which albumin is found in the urine we find uniform ocular changes, therefore, it may be preferable to accept in this instance a symptomatic classification even though it may be unscientific as regards disease nomenclature.

Retinitis albuminuria occurs as a complication in many cases of both acute and chronic nephritis and in the albuminuria of pregnancy. It is most common in the small granular kidney and rarest in the acute forms. Defect of vision, although often an early and even the first symptom, is never associated with an early stage of kidney disease but rather with a late stage of it. Vision is much lowered and even complete blindness may be present. This may be due to changes in the retina or, as is often the case, the result of uremia in which we have spasm of the ophthalmic artery. Both eyes are affected, but as a rule not equally so. With the ophthalmoscope we find a hyperemia of the disk which varies from simple congestion to a well developed "choked disk." *The characteristic fundus lesion consists of whitish degenerative patches arranged in stellate fashion about the macula.* Other whitish areas appear elsewhere and may form large patches which often coalesce and may destroy the afore mentioned characteristic figure. The fovea itself is not affected by these changes but remains intact. Small hemorrhages appear at or about the disk and along the course of the blood vessels. These are indicative of grave circulatory disturbances and are invariably followed in a few months (1½ to 2 years) by death.

Degenerative changes in the arteries, which I have previously described, are frequently seen and result in hemorrhages, detachment of the retina, optic neuritis and optic atrophy. Should the patient recover, as in temporary albuminuria of

scarlet fever or in pregnancy, the early optic and retinal changes sometimes entirely disappear but the injury to the nerve may lead to atrophy and blindness.

As associated but not characteristic symptoms may be mentioned edema of the lower lids, hemorrhage into the lids, iritis (the latter being uremic in origin), paralysis of the extraocular muscles due to hemorrhage into the nerve roots, nuclei or into the nerve itself. These muscle paralyses recover rapidly with or without treatment but are very apt to recur in the same or other muscles. They are indicative of changes in the cerebral vessels similar to those found in the retina.

In those forms of renal diseases in which uremic attacks are frequent (scarlatina and pregnancy) we often have a sudden diminution in vision which rapidly passes on to complete blindness. In these cases the ophthalmoscopic appearance is often negative. The reaction of the pupil is usually retained and is indicative of the cortical site of the blindness.

In eclampsia, however, we generally have mydriasis, pallor of fundus (due to vascular spasm, probably from direct action of the poisons upon the muscular walls of the vessels) and convulsions which affect both the intra- and extraocular muscles. The prognosis depends upon the curability of the causal factor. Uremic amblyopia or amaurosis often disappears in from 24 to 36 hours, but should the optic nerve itself be affected, atrophy and blindness result.

#### CONSTITUTIONAL DISEASES.

In diabetes mellitus the most common and suggestive appearances are (1) the development of bilateral cataracts in young people, and without visible cause, and (2) the appearance of small retinal hemorrhages with fine changes in the form of glistening dots about the macula lutea, somewhat similar to those which occur in Bright's disease, except that they rarely form a well marked star. Leber lays down the important rule that in all cases of retinal hemorrhages the urine should be examined for sugar. Hirschberg found sugar in the urine in 1 per cent. of all his patients. The other and less diagnostic symptoms which are frequently found are weakness of accommodation and convergence; iritis and iridocyclitis; spontaneous short-sightedness at the age of 40 to 60 years without opacity of the lens, vitreous opacities and hemorrhages, inflammatory and degenerative changes in the retinal vessels and optic nerve. Of these, hemorrhages are the most frequent, and as they occur even more frequently within the cranial cavity their presence gives a bad prognosis. Cerebral symptoms are demonstrated by scotomata, hemianopsia or amaurosis without ophthalmoscopic findings.

The paralysis of the ocular muscles due to nuclear or peripheral hemorrhages or to peripheral neuritis are usually incomplete and temporary. Pure paralysis of accommodation in middle life is especially suggestive of diabetes.

The peripheral neuritis may cause neuralgias, neuroparalytic keratitis or herpes zoster ophthalmicus. In advanced cases furunculosis of the lids and corneal ulcers are common. From the above it is evident that the urine should be examined for sugar in all the severer eye affections.

Glaucoma is not an infrequent complication in diabetes. The cataracts that develop in this disease can be operated upon with impunity.

#### EXOPHTHALMIC GOITER.

In this disease we have many valuable signs of which one or more may be the only diagnostic symptom. The exophthalmus is due to increased growth of the orbital contents, to edema, and to congestion of the retrobulbar vessels. It, like all the other symptoms, may occur in paroxysms, may diminish or increase or may remain permanent and uniform. Partial insensibility of the cornea gives rise to infrequent winking and is known as Stellwag's sign. Graefe's sign—due probably to the same cause is the lagging behind of the upper lid when the patient looks down, thus exposing a large area of scleral surface. The starring appearance thus produced is known as Dalrymple's sign.

Inequality of the pupils as well as mydriasis (due to sympathetic irritation) with normal pupillary reaction to light are present in many cases. Weakness and paresis of both internal and external eye muscles (Möbius' sign) and pulsation of the retinal arteries in the presence of normal and subnormal tension (Beaker's sign) are symptoms which help to complete the picture of this affection.

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## THE EYE IN SYPHILIS AND RHEUMATISM.

G. HENRY MUNDT, M.D., CHICAGO.

It will be necessary for me to be very brief in presenting this phase of the subject, therefore I ask that you bear with me if the consideration of the eye in syphilis and rheumatism seems too concise, and I wish at this time to state that I shall make no effort to give a complete treatise on the subject, but will give only those points which I consider of interest to the general practitioner. Just the same as general syphilis may manifest itself in the hereditary and the acquired types, also may the ocular manifestations be divided into those of the hereditary and the acquired forms. Interstitial or parenchymatous keratitis is the most frequent eye trouble for which the inherited luetic seeks relief; however, the acquired form may in some cases be responsible for it; this condition is ordinarily seen in patients between 3 and 15 years of age; it is manifested by interference with vision, and in the early or acute stages by photophobia, lacrymation, and pain, there is circumcorneal injection of a yellowish-red color (which in the severer cases is the typical salmon-colored patch), the cornea becomes hazy and steamy, somewhat resembling ground glass, it is ordinarily accompanied by the usual signs of inherited syphilis, such as the general glandular involvement and the typical teeth. Treatment consists of atropin and heat locally, and later stimulant ointments with massage, and last but by no means least, building the general health, also some recommend the use of mercurials, but as to the advisability of these I am in doubt.

Iritis may in some cases be caused by inherited syphilis; however, iritis *per se* caused by inherited lues is, I think, as uncommon as it is common in the acquired type; however, it is a common accompaniment of parenchymatous keratitis. Various other eye troubles may arise from hereditary lues, either independently or in conjunction with keratitis; chief among these are chorioiditis anterior, retinitis, and diffuse scleritis.

Far and wide, the most frequent cause of iritis is acquired syphilis. This condition is manifested by the ordinary signs of iritis, such as circumcorneal injection, sluggish pupil and dull, discolored iris. It is ordinarily seen in one of two distinct types, viz., iritis papulosa and iritis gummosa. However, many cases of syphilitic iritis present absolutely no characteristic marks, the diagnosis depending upon either a history, reaction to some test, such as the Wassermann reaction, or yielding to antisymphilitic treatment. It may be well to call your attention to the fact that iritis may arise in a syphilitic patient from some other cause than the lues, so the mere matter of securing a specific history does not necessarily prove that the eye trouble is of luetic origin. Iritis is usually a manifestation of the secondary stage (if such a division can be made) when we ordinarily have the nodular or papular form. This is characterized by yellowish-red nodules about the size of a pin head. These are situated at the margin of the iris. They are very apt to be numerous. In some cases the papules are so small as to be invisible to the naked eye; they being located in the tissue of the iris; firm synechia



are usually formed. During the tertiary stage of syphilis gummata may form in the iris; however, these are extremely rare. The treatment of syphilitic iritis is quite obvious; however, it may be well to state that in the active stage of papular iritis it is not well to push antisyphilitic remedies, while in the gummatous condition heroic dosage is advisable. The ciliary body is liable to the same involvement as the iris, and it is far from probable that there is ever any iritic trouble without the ciliary body being inflamed at the same time.

Disseminated chorioiditis is often seen, syphilis being its most frequent cause. In conjunction with the chorioidal trouble the retina is usually involved, giving chorioidoretinitis. Associated with this are usually seen vitreous opacities. Syphilitic chorioidoretinitis is characterized early by diffuse cloudiness of the retina, numerous chorioidal exudations, especially in and around the macular region, and there are apt to be fine punctate opacities in the vitreous; the retina finally atrophies in spots. Also there are patches of chorioidal atrophy, spots of pigment, and frequently we see vitreous opacities. The prognosis of this condition depends upon the location of the spots, as vision may remain very good if the papillo-maculary region escapes. Treatment consists of the ordinary syphilitic regime.

Syphilitic retinitis, as stated above, is most frequently observed along with some disease of the uvea, such as iritis, chorioiditis, and frequently we see neuroretinitis; luetic retinitis appears under two forms, viz., diffuse and circumscribed. In the diffuse form the whole retina is clouded and slightly gray, and throughout the field, especially in the macular region, will be seen spots of an intense gray. Later, as this retinitis abates, there will be clumping of pigment here and there, giving a picture quite similar to retinitis pigmentosa; however, it should not be difficult to differentiate these two, one of the most obvious points of differentiation being the absence of chorioidal atrophy in retinitis pigmentosa. In the circumscribed form of retinitis a bulky white exudate will be seen either in the region of the macula or close to some large vessel; this later is transformed into cicatricial tissue which, on shrinking, may cause detachment of the retina.

Optic neuritis is very often caused by syphilis. This neuritis may be caused in one of two ways, viz., the nerve may be attacked directly by the lues, or there may be orbital or intracranial inflammation or tumors resulting from syphilis. If we have simple neuritis, *e. i.*, no retinitis or chorioiditis, or if we have merely a choked disc, the prognosis is ordinarily favorable. If syphilitic optic neuritis is not properly attacked with the requisite therapeutic measures, marked permanent visual disturbances result, while if properly met glowing results usually ensue.

Post-syphilitic conditions, such as tabes, may cause paralysis of the sphincter pupillæ, external eye muscles, or accommodation. Among the less frequent conditions which are caused by syphilis are chancre of the lid or conjunctiva, papular scleritis, which will be observed during the secondary stage of the disease, and orbital periostitis.

In the treatment of the acquired syphilitic affections of the eye I think that usually better results will be obtained from the use of large doses of syphilitic remedies; especially is this true when potassium iodid is used or when the eye becomes involved early in the disease.

Practically the only eye trouble which is referable to rheumatism is rheumatic iritis. This is one of the most obstinate forms of iritis; it occurs usually in persons who have had articular rheumatism, and is apt to be seen during an acute exacerbation of the arthritis; pain is very severe; the treatment consists of local measures combined with the obvious internal remedies. There are several other conditions, such as rheumatic scleritis and keratitis, which are ordinarily considered of rheumatic origin, but inasmuch as there is nothing certain about this (and personally I think there is some other cause), I will not at this time consider them.

6300 Halsted Street.

## THE EYE AS AN AID TO DIAGNOSIS IN DISEASES OF THE BRAIN AND SPINAL CORD.

E. N. LAYTON, A.M., M.D.

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It is impossible, in the space allotted, to discuss this subject in more than a categorical manner. This will explain the brevity and dogmatism often employed and must answer as sufficient apology therefor. Taking up first the disease of the brain, the principal disturbances showing important eye-symptoms are meningitis, encephalitis, tumor, infantile cerebral palsy and hydrocephalus.

Pachymeningitis presents no significant eye-findings. The same is true of inflammatory lesions of the pia mater when affecting the convexity of the brain. When, however, the leptomeningitis is basilar in its distribution, cranial palsies result and the eye usually shows myosis, followed later by wide dilatation and sluggish reaction of the pupils, which are often of unequal size. Papillitis is an early and constant symptom. Tubercular meningitis, the typical chronic basilar inflammation, presents, in the eye, many marked symptoms. Vision is lessened, the pupils are contracted and very sluggish in reaction to light, and they later become widely dilated. The fundus is deeply congested, while the finding of retinal tubercles is pathognomonic. A strong, convergent upward squint is a frequent accompaniment.

Apoplexy is marked by many significant changes in the eyes. Whether due to cerebral hemorrhage, thrombosis or embolism, the same, or very nearly the same, eye-symptoms are found. The pupils are very sluggish or completely inactive and are contracted; the lids show no normal palpebral reflex. In hemorrhage, the conjunctivæ are congested, while in thrombosis and embolism they are pale. The eyes are turned away from the paralyzed side of the body and toward the side of the brain affected.

A marked, boggy swelling about one eye, with exophthalmos and retinal thrombosis, when occurring in the course of any long, chronic, exhausting disease, is at least suspicious of sinus-thrombosis, and some even consider these findings alone sufficient to establish that diagnosis.

Primary hemorrhagic encephalitis is rare and very difficult to diagnose. Of suggestive importance in this unusual condition are sudden, violent onset, with rigidity of the neck, sluggish pupils and squint. Brain abscess, the more common, secondary variety, always follows some previously existing pyogenic infection and may arise from direct extension or metastasis. There are no pathognomonic eye-symptoms, but in any recognized pyemic condition, a conjugate deviation of the head and eyes, with other cerebral symptoms, should excite suspicion of brain abscess.

Brain tumor presents certain eye-findings regardless of the location or character of the growth, and when any part of the visual tracts, from nucleus to retina, is involved, definite focal symptoms are added. As to the general symptoms, double optic atrophy is present in fully eighty per cent. of the cases. When the papillitis is associated with severe headaches, vomiting, particularly of the so-called projectile type, with vertigo, convulsions and mental impairment, the diagnosis is established. The focal symptoms, when directing attention to the visual apparatus, are sufficient, in most cases, to locate the site of the neoplasm, and to determine whether it has involved the optic nerve, the chiasm or the optic tract above the decussation. If the optic nerve, between the chiasm and the retina, is affected, vision in the eye of that side only is involved. If the lesion is at the chiasm, the nasal halves of both retinæ suffer, and the blindness is apparent in both temporal visual fields. Should the growth occur in the optic tract above the chiasm, half of each retina is blind, as in the last instance, but it is the nasal side of one and the temporal side of the other, because, at the chiasm, practically half the fibres of each optic tract cross over to the optic nerve of the opposite eyes, the outermost fibres, in each instance, supplying the temporal sides of each retina, the innermost fibres, the nasal sides. For example, supposing a tumor to be located in the right optic tract, the temporal half of the right retina

and the nasal half of the left retina would be affected and the right nasal and left temporal visual fields would be blind.

The eye-findings are of assistance, then, in locating the cerebral neoplasm if the papillitis, pain, etc., are more marked on the one side, or if there are definite focal symptoms, as already detailed. If there should be a post-orbital growth, it may cause unilateral exophthalmos, especially in children, and this may help in localizing the lesion.

The cerebral palsies of children present very few eye-symptoms of diagnostic value. The tight puckering together of the lids as a part of the familiar athetoid grimace is classic, but is only a very insignificant part of the clinical picture and is of little value in the diagnosis of this condition. The eye in amaurotic family idiocy, however, does present distinctive and characteristic findings by means of the ophthalmoscope. The optic atrophy is not extreme and the optic disk is not pure white, but of a distinct brownish color, gray towards its periphery, and the retinal vessels are not entirely obscured. With these findings in the fundus are associated very sluggish pupils, with marked deviations and nystagmus.

In extreme hydrocephalus, the hypertrophy of the frontal bones causes a tilting of the eyeball downward, often to such a degree that the lower lid obscures most of the iris and the patient appears to be blind, even before all sight of the eye is lost. Extrinsic paralyzes usually result in these extreme cases, although in the milder ones there is little disturbance, beyond the prominence of the eyeballs.

#### DISEASES OF THE SPINAL CORD.

The more important diseases of the spinal-cord presenting significant eye-findings are tabes, multiple sclerosis and general paresis. Closely associated with these is cerebrospinal syphilis. I wish particularly to emphasize the fact of the many and varied disturbances in the eye in tabes. These range from a simple excessive lacerimation to exophthalmos, nystagmus, palsies or total blindness, while the pupils show as great a range of disorders; they may be dilated, contracted, sluggish in their response to light or accommodation, may show a complete loss of pain sense or an absolute iridoplegia. General paralysis of the insane is the only disease showing an equally varied visual disturbance. This great range of possibilities in the tabetic eye we are apt to forget. The classic features of accommodative reaction with failure to respond to the light stimulus, constituting the Argyll-Robertson pupil, is more familiar and not so often overlooked. It is present in 75 per cent. of the cases. If the eyes become affected at all, blindness is the rule, and optic atrophy occurs in 10 per cent. The symptoms of failing vision appear in the following order: First, a contraction of the color-fields; second, a narrowing of the field of form-perception, and, finally, diminished vision, with hemianopsia, central scotomata and finally total blindness.

The diagnosis of multiple sclerosis depends largely upon the eye-findings. We find lateral nystagmus in 75 per cent. of the cases; bilateral ophthalmoplegias of nuclear origin are the rule. The pupils are myotic and show reduced activity to both the light and accommodative stimuli, but the typical Argyll-Robertson phenomenon is wanting. Vision is much reduced and papillitis, scotomata and atrophy are often found. These tremendous changes in the eye, especially when associated with the classic monotonous, scanning speech, are sufficient to establish the identity of this condition.

As already intimated, general paresis shows a great variety of apparently paradoxical symptoms in the eye. The pupils are usually inactive to light, unequal and of very small size; the inequality of the pupils varies from time to time, one and then the other being the larger at different times. Generally the pupils are also of very irregular outline.

Fifty per cent. of all cases of cerebrospinal lues present third nerve palsies with resulting ptosis and pupillary disturbances. When the pupils are fixed and inactive, the suspicion of syphilis is well founded. The rigid pupil is to cerebrospinal syphilis what the Argyll-Robertson pupil is to tabes.

## DISEASES OF THE PERIPHERAL NERVES.

A discussion of the peripheral nerve lesions manifested by symptoms in the eye amounts to that of the ocular palsies. A disturbance causing a paralysis of the third cranial nerve is shown in the eye by ptosis, wide dilatation of the pupil and a strong divergent squint, the latter being due to the unopposed action of the sixth nerve upon the external rectus. Isolated palsies of the other oculomotor nerves is rare, but there are a good many cases reported in the literature. When the fourth nerve alone is involved, resulting in a superior oblique paralysis, diplopia follows from the necessary interference with convergence and accommodation, in which this mechanism plays an important part. This is due largely to a variable degree of rotation of the ball of the eye on its antero-posterior axis. In lesions affecting the sixth nerve, the paralysis of the external rectus prevents outward rotation of the eye and results later in strong internal squint and intense diplopia is complained of. The early eye-symptoms of seventh-nerve palsy, associated with those of the rest of the face, are a drooping of the lower eyelid, lacrimation and inability to close the eye tightly. Later, the motion of the lower lid is almost entirely lost, the palpebral opening is much smaller than normal, the cornea is constantly exposed and ulceration and perforation often result.

Multiple neuritis is closely related to these peripheral disturbances, both in pathology and symptoms. The usual toxic variety presents a bilateral contraction of the visual fields, and often there is sudden blindness. In 10 per cent. diplopia and squints are encountered. A nuclear lesion of this disease may declare itself by a complete ophthalmoplegia; or even isolated oculomotor paralysis may result from the localized action of the toxins on the particular nerve involved. This selection is rare, and some assert that a localized intoxication, even in a nerve, is an impossibility. The effect on the pupils is varied. They may be dilated, contracted or unequal; accommodation is generally not normally brisk, but there is no typical Argyll-Robertson reaction.

## NEUROSES.

Certain of the neuroses present well marked disturbances in the eye. Most notable of these is exophthalmic goiter (Basedow's disease). The protruding eyeballs, with their fierce, staring expression; the failure of the upper lid to follow the eyeball perfectly in its downward movements, at times exposing wide portions of the sclera beyond the limits of the iris (von Graefe's sign); the failure of the lower lid and eyebrows to assist when the patient looks upward; these, together with tachycardia and fine, rapid tremor, make up the picture of exophthalmic goiter, whether or not there is an associated enlargement of the thyroid. If there is a unilateral exophthalmos, it will usually be found on the side on which there is the greatest enlargement of the gland.

Among the legion disturbances of hysteria, the eye shows some changes which are of great interest and value in diagnosis. These may be anything from the simplest degree of excess in lacrimation or photophobia to an absolute blindness; and I wish to take the occasion, even if digressing a little, to emphasize the importance of leaving hysteria out of consideration until every organic lesion which could possibly present the picture encountered has been regarded, and then not making such a diagnosis without the finding of many of the recognized stigmata of this neurosis.

Aside from hysterical blindness, or other very grave manifestation, the first objective finding of value is a contraction of the visual fields, associated with such an inversion of the normal color formula that red is perceived at a greater distance from the central point than blue.

5900 Halsted Street.



**EDGAR COUNTY.**

The regular quarterly meeting of the Edgar County Medical Society was held in the Assembly Room in the Carnegie Library building, Paris, Ill., at 2 p. m. The following members were present: Paris, Drs. W. A. Buchanan, C. S. Laughlin, E. O. Laughlin, Z. T. Baum, George H. Hunt, W. H. Ten Broeck, George W. Fuller, Mark Rowe, W. H. Hoff, L. O. Jenkins, Nettie Murphy and Fred, G. Cretors. Dr. J. W. Evinger, of Elbridge; Dr. C. L. Kerrick, of Chrisman; Dr. G. F. English, of Isabel; Dr. O. E. Glick, of Metcalfe; Dr. H. Lycan, of Vermilion, and Dr. H. C. Kerrick, of Brocton. Dr. C. L. Kerrick, president, presided at the meeting, with Dr. Fred. G. Cretors as secretary. After the reading of the minutes and the allowing of a few bills, the following officers were elected for the ensuing year: President, Dr. Bertha L. Clinton; vice-president, Dr. N. P. Smith; secretary, Dr. Fred. G. Cretors; treasurer, Geo. George H. Hunt. Dr. J. W. Pettit, of Ottawa, president of the Illinois State Medical Society, was present and delivered an address on "Medical Organization," which was well received. In the evening Dr. Pettit also delivered an address to the public at the Presbyterian Church on "The Problems of Tuberculosis."

**DE WITT COUNTY.**

The annual meeting of the DeWitt County Medical Society was held Tuesday, April 13, in the Court House at Clinton at 2 p. m. The following were present: Drs. Graham, A. H. Campbell, C. H. Carter, J. M. Wilcox, Kirby, Chapin and Dowdell. The minutes of the previous meeting were read and approved. A paper on "Gallstones, Etiology and Treatment" was given by Dr. G. G. Dowdell, which was freely discussed by all present. This was followed by an address by the retiring president, Dr. Graham, on "Neglect of the Members in the Society," which called forth free discussion.

The following officers were elected for the ensuing year: President, Dr. G. G. Dowdell; vice-president, Dr. C. W. Chapin; secretary-treasurer, Dr. C. W. Carter; censor, C. R. Sanderson, Waynesville; delegate, Dr. Graham; alternate, Dr. J. M. Wilcox. The secretary was instructed to write to each of the state Representatives and Senators condemning the Osteopathy Bill. The meeting then adjourned.

DR. C. W. CHAPIN, Secretary.

**MARSHALL-PUTNAM COUNTY.**

The annual meeting of the Marshall-Putnam County Medical Society was held at Toluca May 11, 1909. A generous welcome was extended by the entire local profession of the city and a remarkably full attendance of the local medical profession was in evidence. The program for the occasion was carried out in detail with no exercise omitted. Dr. J. W. Pettit, of Ottawa, president of the State Medical Society; Dr. C. C. Hunt, of Dixon, counselor for the second district; Dr. J. F. Percy, of Galesburg, counselor for the fourth district, and Dr. C. D. Thomas, of Peoria, were present and made interesting contributions to the exercises, while Dr. E. W. Weis, of Ottawa, secretary of the state society, was likewise in attendance, as well as a number of other visiting members of the profession. The exercises consisted of the "Annual Address of the President," by Dr. Wm. A. Simmons, of Magnolia, who considered the interests and success of the local society; "Consumptive Predisposition," by Dr. S. O. Hendrick, of Henry; "The Importance of Medical Organization," by Dr. J. W. Pettit; "Fracture of the Femur," by Dr. C. C. Hunt; "General Peritonitis and Its Treatment," by Dr. J. F. Percy, and "Tonsils and Adenoids," by Dr. C. D. Thomas. The following officers were elected for the ensuing year: President, Dr. G. A. McCormick, Hennegun; vice-president, Dr. C. H. Keveys, Lacon; secretary-treasurer, Dr. M. C. Weeks, Granville; delegate, Dr. F. T. Potts, Toluca; alternate delegate, Dr. O. F. Taylor, Granville;

member medical legal committee, Dr. S. O. Hendrick, Henry; boards of censors, Drs. McCormick, Keveys and Weeks. The meeting then adjourned to meet the second Tuesday in October, 1909, at Granville, Ill.

#### MADISON COUNTY.

A special meeting of the Madison County Medical Society was held at the rooms of the Commercial Club at Edwardsville on April 28, at 7:30 p. m., with the president, Drs. S. T. Robinson, in the chair. Those present were Drs. Threadgill, Fisher, Robinson, Cook, Hastings, Smith, Schreifels, J. H. Fiegenbaum, Goldberg, Ferguson, Pogue, Oliver, Merwin, Wharff, Engel, Spitze, Hirsch, Wahl, Barnsback and E. W. Fiegenbaum. This meeting was called to meet our district counselor, Dr. Carl E. Black, of Jacksonville, who delivered a highly entertaining and instructive lecture on "Lacerations of the Perineum," which was illustrated by stereopticon. This was one of the most enthusiastic meetings of the year, the discussions being participated in by nearly every one present. A vote of thanks was tendered to Dr. Black, whose annual visits are appreciated and whose efforts materially assist in creating an interest in this society.

E. W. FIEGENBAUM, Secretary.

#### MACOUPIN COUNTY.

The following officers have been elected for the ensuing year in the Macoupin County Medical Society: President, D. E. K. Lockwood, Virden; vice president, Dr. Morgan, Nilwood; secretary-treasurer, Dr. H. A. Pattison, Benld.

#### M'LEAN COUNTY.

The fifty-ninth annual meeting of the McLean County Medical Society was held in the City Hall, Bloomington, Ill., April 1, 1909, Dr. Godfrey presiding. The minutes of the preceding meeting were read and approved. Dr. Taylor, chairman of the committee appointed to go to Springfield to appear before the Judiciary Committee of the House, regarding osteopathic bills, reported for his committee. This bill was referred to the sub-committee and it was hoped that a favorable impression was made upon the members of this sub-committee and that they would take unfavorable action on these bills. Bills were allowed as follows: Dr. E. W. Weis, state dues, \$85; Nimrod Mace, printing, \$1.75; R. D. Fox, postage, \$1. The secretary-treasurer's report for the year was read and approved. The annual election of officers was then held. Dr. Fenelon having declined the nomination, the secretary was instructed to cast the entire vote of the society for Dr. E. Mammen for president. The balloting for the officers showed the following elected: Vice-president, Dr. F. H. Wakefield; secretary-treasurer, Dr. A. R. Freeman; board of censors, Drs. O. M. Rhodes, J. K. P. Hawks and F. C. Fisher; delegate to state convention, Dr. F. H. Godfrey.

Dr. Godfrey gave his valedictory address, urging members to attend and take part in the meetings. In this address he ably and pointedly referred to the accomplishments of the year and urged observance of ethics and better fraternal relations.

A paper was read by Dr. R. G. Yolton on "Thyroids and Parathyroids," parts of which are given here.

"The thyroids are enclosed by a fibrous capsule, which divides behind in such a manner that it not only covers the glands posteriorly but also passes behind the esophagus and between the esophagus and trachea. With such encapsulation we can readily see how the growth of this gland or the development of tumors within its tissue may cause serious pressure and distortion of the structures in immediate relation to it. The thyroids are ductless. The blood supply is abundant. The function of the gland is a complex one. Among the various functions is the dilating effect on the capillaries. We may have hyperthyroidism or hypothyroidism.

"The parathyroids were supposed to be accessory thyroids until 1897, when it was shown that they were most important structures, having a separate function from the thyroid and seemingly to control to a great extent the nervous system. Disregarding the difference in function between the two bodies, it is quite evident that they exercise an important control over the processes of nutrition of the body, especially perhaps of the central nervous system.

"Our present knowledge indicates that a most unfortunate complication, tetany, which occasionally follows removal of goiter, is caused by the loss or injury to the parathyroids. The loss of the thyroids can be supplied to a great extent by feeding the gland, but parathyroid feeding is not a success for tetany."

Dr. E. Mammen led the discussion and pointed out relationship between these glands and the pituitary body, the suprarenals and other ductless glands. Then the discussion became general and was participated in by all present. The society now issues a monthly bulletin containing, besides the transactions of the meetings, items of interest to the members of the profession in McLean county.

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### MORGAN COUNTY.

Meeting held May 13, 1909, at the Public Library, in Jacksonville, Ill. The program was confined to reports of cases by some of the physicians present. Dr. F. P. Norbury reported in part several cases of pontine angle brain tumors. All cases at one time or another showed typical symptoms. 1. One showed the first symptoms in January and hurried to a close, the patient dying the last of April. In this case the differential diagnosis of brain syphilis had to be considered. 2. Another showed left frontal lobe involvement and a localized epilepsy. Death occurred here also, the patient passing away in a thirty minute convulsion. 3. One case reported had not had a complete localization made as yet, but presented hemianopsia in the outer fields of both eyes, only a small amount of form sense, headaches and evidences of optic neuritis in both fundi. Others had attributed the phenomena of this case to chronic uremia, but Dr. Norbury had found nothing to support this case. 4. Also reported a case of recurrent bone carcinoma in the lumbar region following breast cancer operation.

Dr. E. L. Crouch reported: 1. A case of recurrent cancer in the sacral region following operation for removal of malignant breast tumor. 2. Exhibited a brain, showing hemiatrophy and right lateral ventricle dilatation in a hemiplegic, who, years ago, sustained a head injury from falling through a sky-light. Death in this case was due to general peritonitis, subsequent to chronic enteritis and volvulus, in which there was enormous dilatation and thickening of the sigmoid.

Dr. Carl E. Black remarked on the frequency with which the referring physician overlooked cancerous conditions. A recent case sent in for hemorrhoid operation, in which inoperable cancer of the uterus was present, was cited. 2. Also reported a case of carcinoma involving omentum, intestines and liver, in which any attempt at surgical treatment other than exploratory operation would be fruitless.

A resolution was presented and passed endorsing the work of Dr. Carl E. Black as Councilor of the Sixth District and instructing our delegate to present the endorsement to the House of Delegates, together with a renomination of the present incumbent to that office.

GEORGE STACY, M.D., Secretary.

## NEWS OF THE STATE

### PERSONALS.

Dr. Rowland L. Green, Peoria, has sailed for Europe.

Dr. George M. Peairs, of Joliet, sailed for Europe May 4.

Dr. Ulysses S. Grim, of Chicago, sailed for Europe May 4.

Dr. William B. Peck, Freeport, has returned from Europe.

Dr. G. Paull Marquis, of Chicago, left for Europe May 24.

Dr. Henry J. Reynolds has permanently returned to Chicago.

Dr. Thomas A. Woodruff, Chicago, has been elected president of the Calumet Club.

Dr. Carl Wagner has been appointed attending surgeon to the Columbus Hospital of Chicago.

Dr. William R. Parkes has been elected president of the Evanston Anti-Tuberculosis Association.

Dr. James F. Harris, Ogden, was fired on by an unknown assailant May 31 and wounded in the leg.

Dr. and Mrs. A. R. Reynolds, of Chicago, have returned from California, where they spent the winter.

Dr. Orville B. Blackman, Dixon, was seized with a cerebral hemorrhage April 20, but is reported improving.

Dr. Vernon Holbrook, Peoria, while running to catch a car April 28, fell and fractured his leg at the ankle.

Dr. J. Elliott Colburn, of Chicago, will have his office at 34 Washington street, room 1009. Hours, 1 to 4.

Dr. Louisa L. Munch, Joliet, was operated on for appendicitis in Mary Thompson Hospital, Chicago, April 14.

At the election of April 17 at Beardstown, Ill., Dr. T. J. Sehwee was elected president of the Board of Education.

Dr. David Lieberthal, Chicago, has resigned his position as professor of skin and venereal diseases in the Illinois Medical College.

Dr. Arnold C. Klebs, of Chicago, left May 11 for Geneva, Switzerland, where he expects to spend two years in study and research work.

Dr. Alfred C. Cotton, of Chicago, who recently has been recuperating at Biloxi, Miss., has returned to his home very greatly improved in health.

Dr. George S. Murphy, Rockford, has moved to Lubbock, Texas, where he is now building a thirty-bed hospital, to be known as Lubbock Sanatorium.

Dr. B. B. Beeson, of Chicago, has returned from a trip of four months' duration, during which he visited the country bordering on the Mediterranean and Jerusalem.

Dr. Isaac A. Abt, Chicago, has resigned as associate professor of pediatrics in Rush Medical College and has accepted the professorship



of pediatrics with Dr. Frank X. Walls in Northwestern University Medical School.

Dr. Frank Billings, Chicago, his daughter, Miss Margaret, Miss Clara O. Brawley, and Mr. and Mrs. C. K. G. Billings and their son and daughter will sail June 16 for Europe. They expect to make an extensive trip through Russia, Norway and Sweden.

Dr. Otto T. Freer, of Chicago, has been elected a corresponding member of the Danish Oto-Laryngological Society in recognition of his work in rhinology and laryngology and in appreciation of his operative demonstrations in Copenhagen last summer.

Dr. Alfred N. Murray, of Chicago, has announced that he is no longer associated with Drs. Wood, Allport and Woodruff. He further announced that he would continue to limit his practice to affections of the eye, ear, nose and throat, with offices at 100 State street and 1904 Evanston avenue.

Dr. Howard Kelly spent a week in Chicago recently taking stereopticon views of the special operations of E. W. Andrews, A. J. Ochsner, L. L. McArthur, A. D. Bevan, John B. Murphy, A. H. Ferguson and others. He was much entertained by the profession here. Dr. M. Rubel, of Chicago, one of his pupils, gave a luncheon at the Annex for Dr. Kelly.

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#### NEWS ITEMS.

By the will of Otho S. A. Sprague, who died Feb. 12 in Pasadena, a bequest of \$20,000 is made to the Presbyterian Hospital of Chicago.

The Francis E. Willard Temperance Hospital is one of the two principal legatees of the estate of the late R. Thomas D. Fisher, Leroy, which is valued at \$75,000.

A concert was given in Orchestra Hall, Chicago, May 2, to aid the building fund for the new German Evangelical Deaconess Hospital at Fifty-fourth place and Morgan street.

Degrees were conferred on a class of 31 by Dr. Jacob F. Burkholder, president of the Illinois Medical College, April 30. The doctorate address was delivered by Dr. William F. Rittenhouse.

The House of Representatives has passed, by a vote of 18 to 13, Representative Rutzler's bill creating a board of chiropody to be appointed by the Governor, with power to examine and license applicants.

Dr. T. J. Balhatchett, of Chicago, was recently indicted by the grand jury of Cook county on a charge of perjury. It was alleged that the doctor swore to a certificate of illness which he issued to one Josie Mason, declaring the young woman could not appear in court for trial. The judge said he found that the doctor had not attended the young woman, and that she was not sick.

Dr. George E. Pettey, of Memphis, Tenn., has closed his Denver and Atlantic City Retreats, and has sold his interest in the Oakland Retreat to his former associate, Dr. C. L. Case, who will continue the work at

Oakland in his own name. Improved facilities have been provided at the Memphis Retreat for handling alcohol and drug cases, and hereafter Dr. Pettey's entire work will be done there.

An addition to the dispensaries of Chicago is the Calumet Avenue Branch of the South Side Dispensary, erected adjacent to the Mery Hospital of the Northwestern University Medical School at a cost of \$30,000. A large faculty room, two recitation rooms, thirteen small examining rooms, drug rooms, and photographic room and x-ray room are on the first floor; on the second floor there is an assembly hall for clinical demonstrations, with a seating capacity of 300.

The labor of patients will, it is announced, be used largely in the construction of the new buildings of the Illinois Northern Hospital for the Insane at Elgin this year. Dr. George Lucas of the hospital staff has been placed in charge of the construction work. The first undertaking will be the construction of a general bath house and swimming tank for patients; the second, the erection of a hospital for the acute insane, to cost \$35,000.

Dr. H. M. Harrison, of Quincy, retires from practice. Dr. Harrison writes us the following: "Kindly send my *Journal* to LaPorte, Texas, instead of Quincy, Ill. Am on my way south, retiring from practice after 31 years' work, to my fruit farm at the above place. Have paid my dues in Adams County Society to January, 1910, and want to keep in touch with things medical, until that time at least, in Illinois. Better come down to the Doctors' Mecca and join us in raising oranges, figs, etc. With best wishes, I am,                      Fraternally,                      H. M. HARRISON."

Poem dedicated to his classmate, the late Dr. F. M. Crane, of Pittsfield, Ill., by Dr. E. S. Goodhue, of Hawaii, taken from the April issue of *American Medicine*:

I'll soon be coming up your way;  
 'Tis but a journey, dear, and  
 We shall meet again, I know.  
 In that fair land where thou hast gone—  
 Where flowers and palms and blessings grow.

'Tis but a step from here, and  
 There, as here, the skies are blue;  
 What matters it what lies between,  
 If ships are strong and friends be true.

'Tis little change, they say, and  
 The wide river is not dark—  
 While his firm hand is at the helm,  
 Guiding along the tiny bark.

'Tis wrong to mourn; I laugh, and  
 Wave my hand to you, my dear;  
 Death has no terrors for me: ah,  
 He is the least foe that I fear.

Then shall I wear bright flowers, and  
 Smile with the sunshine of the day;  
 Goodbye, my friend, my lucky friend—  
 I'll soon be coming up your way.

During the recent session of the Illinois State Medical Society at Quincy announcement was made by Dr. George W. Webster, president of the State Board of Health, that Senate Bill No. 214, known as the Osteopathic Bill, had been defeated in the House of Representatives at Springfield. The audience arose and literally shouted their joy at the news of this defeat. Conspicuous among those who have made strenuous efforts to defeat this bill may be mentioned the following:

Dr. L. C. Taylor, Springfield, and his legislative committee of the Illinois State Medical Society, Dr. C. J. Whalen and his public relations committee of Chicago, the president and secretary of the State Board of Health. The ballot was as follows:

YEAS		
Abbey.	Fieldstack.	Kleeman.
Adkins.	Finley.	Lantz.
Bolin.	Flannigen.	Lyon.
Briscoe.	Foster.	McCoanell.
Burgett.	Fulton.	McGuire.
Butts.	Galligan.	McLaughlin.
Campbell.	Gillespie.	Murphy.
Carter.	Gorman.	Myers.
Church.	Grace.	Perkins.
Crawford.	Groves.	Pervier.
De Wolf.	Holaday.	Price.
Donahue.	Huston.	Riley.
English.	Kerrick.	Shaw.
Erickson.	King.	Stearns.
Espy.	Kittleman.	
Ayes .....	44	

NAYS		
Abrahams.	Flagg.	Murphy.
Allison.	Forst.	Nelsch.
Alschuler.	Geskewich.	O'Brien.
Ap Madoc.	Glade.	O'Toole.
Bardill.	Gray.	P'erson.
Beck.	Griffin.	Poulton.
Beckmeyer.	Hagan.	Robinson.
Behrens.	Hilton.	Shanahan.
Black.	Hruby.	Shepard.
Blair.	Hull.	Shepard.
Brady.	Hutzler.	Smejjkal.
Brownback.	Keck.	Stevenson.
Burns.	Kerrick.	Tippit.
Bush.	Kirkpatrick.	Ton.
Cermak.	Kowalski.	Troyer.
Clark.	Lederer.	Welhorn.
Corcoran.	Lewis.	Werdell.
Curran.	Link.	Wheelan.
Dillon.	Logan.	White.
Dudgeon.	Luke.	Wilson.
Durfee.	McCollum.	Wilson.
Erby.	McMackin.	Wilson.
Etherton.	McNichols.	
Nays .....	68	

NOT VOTING		
Browne.	Montelius.	Sollitt.
Chlperfield.	Morris.	Staymates.
Daley.	Naylor.	Sullivan.
Fahy.	O'Neil.	Terrill.
Groves.	Reynolds.	Waish.
Hollenbeck.	Richardson.	Wright.
Hope.	Rechter.	York.
Kannally.	Rigney.	Zinger.
Lawrence.	Robinson.	Zipf.
Liggett.	Schumacher.	Speaker.
Maclean.	Scott.	

### MEDICAL SOCIETY NOTES.

Bond County Medical Society was organized at Greenville May 4 by Dr. J. Leaming Wiggins, East St. Louis, vice-president of the Illinois State Medical Society, and Dr. Charles W. Lillie, East St. Louis, with charter membership of 15.

At the annual meeting of East St. Louis Medical Society April 26 the following officers were elected: President, Dr. Oro J. Culberson; vice-president, Dr. Roy S. Stanton; secretary-treasurer, Dr. Charles W. Lillic, and censors, Drs. John A. Grimes and Henry R. Ressel.

At the annual meeting of the Physicians' Club of Chicago May 14 Dr. George E. Baxter was elected secretary, vice Dr. Edwin B. Tuteur, and Drs. Frank Billings, Henry T. Byford, William Cuthbertson and Edwin B. Tuteur were elected directors. Henry B. Favill and Charles L. Mix are the hold-over directors.

At the annual meeting of the Central Illinois District Medical Society, held in Pana April 27, the following officers were elected: President, Dr. Don W. Deal, Springfield; vice-presidents, Drs. Franklin A. Martin, Tower Hill, and J. William H. Sparling, Moweaqua; secretary, Dr. Charles Burgess, Pana; treasurer, Dr. John N. Nelms, Taylorville, and censors, Drs. Everett J. Brown, Decatur; John D. Colt, Litchfield, and Louis F. Brown, Hillsboro.

The Chicago Medical Society, in cooperation with the Chicago, Homeopathic, Eclectic and Physio-Medical Societies, the Chicago Bureau of Charities, and the Chicago Relief and Aid Society, are contemplating a dispensary reform movement whereby the various organizations of the city will establish a central investigation bureau, cooperating with the charitable organizations in investigating applications for aid of those who apply for medical charities. Under the contemplated plan there will be no delay in furnishing emergency medical service to deserving or undeserving patients and worthy individuals will be aided as freely and as promptly as before.

At the April meeting of the Douglas County Medical Society the following biographical sketch was read by Dr. Reat:

Mr. President and Members of the Douglas County Medical Society:—Since our last meeting the oldest member of our society has passed from us to his reward.

Washington Brenton, M.D., was an alumnus of Rush Medical College, Chicago, taking his degree in 1854. He then returned to his native state and engaged in the practice of his profession until 1863, when he came to Illinois and settled in Tuscola, where he soon became one of the leading physicians of the county, and continued in active practice until age and feeble health caused him to retire, only a few years prior to his death, which occurred Jan. 28, 1909, at the great age of (within a few days) 86 years.

We, his confreres, knew the doctor to be a very pleasant, professional brother, kind and affable. As a physician he ranked high, was conservative, deliberate, careful and candid in his examinations—not a specialist in anything, but a well read all-round practitioner, who held his patients' interests as a sacred trust. At our society meetings we will miss the kind greetings and generous welcome which he was wont to extend to each of us; for here he appeared at home, yet seldom entered in discussion and read few papers, though what he said and what he wrote showed intelligent discrimination of his subjects.



Dr. Brenton had been an honored and faithful member of the Douglas County Medical Society for forty-five years, of the Illinois State Medical Society and of the Æsculapian Society of the Wabash Valley, and filled various public and private positions as a citizen with honor, leaving to his many friends the rich heritage of a good name, which is better than riches.

It was moved and seconded that the above sketch become a part of the minutes of the meeting and a copy be sent to the family, the ILLINOIS STATE MEDICAL JOURNAL, and Secretary of the Æsculapian Society.

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### PUBLIC HEALTH.

At the meeting of the council of the Chicago Medical Society April 13 resolutions, introduced by Dr. William L. Baum in support of a bill making vaccination compulsory, were adopted.

Mr. Janik, proprietor of the Krakow Institute, on Milwaukee avenue, charged, on complaint of the State Board of Health, with practicing medicine without a license, is said to have been found guilty by a jury in the Municipal court April 22 and fined \$100.

An epidemic of smallpox of mild type is reported in Marengo, where 14 cases have been found, necessitating a strict quarantine, closing of the public schools, and prohibition of church services and other public gatherings.

The Governor has signed the Wright bill, which allows counties to purchase and hold real estate to be used as sites for public tuberculosis sanatoria and gives county boards power to erect and maintain such institutions at the expense of the county. The measure goes into effect July 1.

The chief of quarantine and disinfection of the department of health summarizes the cause of the spread of diphtheria and scarlet fever as follows: Mild unrecognized cases, hidden cases, mild recognized cases about which sufficient precautions have not been taken, and convalescent cases apparently well.

The Chicago Department of Health in its Weekly *Bulletin* gives the following advice regarding the prevention of typhoid fever: "This, of course, is the time of the year when typhoid is least prevalent. It will probably remain low until September. At that time, however, it is more than likely, judging from the experiences of past seasons, that much typhoid will be brought into the city by persons returning from visits to summer resorts. The increase in sources of infection in the city thus comes at a time when flies—known spreaders of the disease—are most prevalent. If there were no flies to spread the infection it is believed that there would be much less typhoid in the late summer and autumn months. There are three things that can and should be done to minimize this danger:

1. Exercise the greatest care in the selection of a place in which you will spend your vacation, especially avoiding those supplying water from suspicious sources—shallow wells, etc.

2. Fight the flies all the time—destroy their breeding places, keep them out of your homes, don't eat or trade where they are much in evidence.

3. If typhoid fever should develop on your premises see that flies do not have access to the patient or to the discharges.

A public health conference was held at the University of Illinois, Urbana, April 23. In the absence of the president, Edmund A. James, the vice-president, Professor Thomas J. Burrill, delivered the address of welcome. Dr. George W. Webster, Chicago, president of the State Board of Health, spoke on the work of the board and pointed out the deficiencies of our state health organization. He suggested that the Governor should appoint a commission and recommend the needed improvements in this state. More comprehensive instruction in public health and closer cooperation between the university and the various state boards which are now concerned with the public health are necessary. Dr. James A. Egan reviewed the existing cooperation between the university and the State Board of Health and considered the proposed water survey legislation in some detail. He favored retaining the laboratory of the board at Springfield. Vice-President Burrill discussed the proposed course in the sanitary science at Cornell University and the advisability of undertaking similar work here, indicating the scope of the proposed organization. Dr. William A. Evans, commissioner of health of Chicago, gave a thorough discussion of the management of the Chicago milk problem. The magnitude of this part of the work may be imagined from the fact that milk is received from 12,000 farms situated in four states. Every farm is inspected and record maps of the farm, indicating its equipment, its sanitary condition and its surroundings, are made by the inspectors and preserved. The sampling and testing of the milk is a large undertaking. Over 30,000 eight gallon cans of milk are received daily. The enforcement of the new ordinances requiring satisfactory tuberculin test of the cows or pasteurization of the milk is proving very satisfactory, and the educational effect upon the milk producers is exceedingly valuable. Prof. W. T. Sedgwick, Boston, spoke of the profession of health officer offering a career for trained young men and mentioned several of the smaller towns in the east where such men devoted their full time to local sanitary matters, to the great benefit of the community. He pointed out the pernicious influence of politics on the public health work. Prof. A. N. Talbot considered the work of the municipal engineer and some of the larger sanitary engineering problems of the state. Dr. John Marten, health officer of Tolono, spoke of the work of the local health officer, pointing out the very serious attitude of the Illinois public in expecting its health officers to do efficient work without paying them anything for their services or even defraying the necessary expenses of the work. The greatest resource of the local health officer is the aid of the Board of Health and the university when he calls on them for advice. These resolutions were adopted:

*Resolved*, That an annual conference of health officers should be held in the state of Illinois, to provide for the instruction of health officers in recent advances of science and of practical experience related to the public health, for the

free discussion of public health problems in the state, and for the expression of opinion by the assembled health officers on methods of promoting the public health, and related subjects.

*Resolved*, That the state university be asked to provide opportunity for more systematic investigation and more comprehensive instruction in hygiene, sanitary science and the sciences related thereto.

*Resolved*, That a committee of three be appointed by the chair to present to the university and to the State Board of Health a plan for carrying out the suggestions made in the above resolutions and to render assistance in securing the necessary legislation.

*Resolved*, That it is the sense of this meeting that a commission should be appointed by the governor, in accordance with the suggestion embodied in Dr. Webster's paper, to study the health department of other states and of our own and to report on the possibility of improvement in the organization of the Illinois department of health.

It is to be regretted that, despite the wide advertisement of this conference, to which invitations were sent by the state university and the State Board of Health, only 5 of the 5,400 city, village and county health officers of the state were present, and of these three from Champaign county and one from Chicago.

The Health *Bulletin* of the Chicago Department of Health gives the following caution and instructions regarding the prevention of diseases spread by the common house fly:

"Chicago is soon to be invaded by millions of the most dangerous insects known to mankind—flies. Now is the time to build your lines of defense. Prepare to fight them as you would wild beasts seeking your life. Flies are the dirtiest and the filthiest of all vermin. They are maggots before they are flies. They are born in filth, live on filth and carry filth around with them. Flies are known to be carriers of millions of death-disease germs and they leave some of these germs wherever they alight. The food you eat is a favorite rendezvous for them. They come to your kitchen, to your dining table, to the baby's milk or the baby's crib, fresh from the privy vault, from the garbage box, from the manure pile, from the cuspidor, from the contagious sick room, or from decaying animal and vegetable matter with this sort of filth on their feet and their bodies, and they deposit this filth on the food you are to eat, on the milk your baby is to drink, or, perchance, on the lips of the sleeping child. You do swallow the filth from the privy vaults, from the garbage boxes, from cuspidors, etc., if you allow flies the freedom of your house or if you eat where flies have access to the foodstuffs. Pleasant thought, isn't it? Flies may infect you with germs of tuberculosis, diphtheria, scarlet fever and other communicable diseases, as well as typhoid fever. After flies have feasted on the infectious matter of a person sick with diseases they may go direct to your baby's crib, to your food, to your drink, or perhaps to a small open wound on your face or hands, and deposit the germs of these diseases. When these germs are deposited in your milk supply they multiply very fast; therefore milk should never be exposed to flies. From this statement of fact it is perfectly apparent that the innocent little house fly is about the worst enemy of mankind. It is equally apparent that any housewife who tolerates these dirty, disease-bearing pests in the home is guilty of slovenly housekeeping. Restaurants infested with these filthy vermin should be

shunned as dangerous to health and life, and any meat market, grocery, milk depot or fruit store in which flies are permitted to come in contact with foodstuffs must be regarded as unsafe places to trade.

#### WHAT TO DO.

Screen your windows and doors. Do it early, before fly time, and keep the screens in place until snow falls. Screen all food—especially milk. Keep flies away from foodstuffs all the time. Keep flies away from the sick—especially those ill with contagious diseases. Kill every one that enters the sick room. Keep the patient's bed screened and immediately disinfect and dispose of all discharges. Catch the flies as fast as they appear. Use the sticky fly papers, traps and liquid poisons. A good fly poison, not dangerous to human life, is a solution of bichromate of potash, 1 dram dissolved in 2 ounces of water and sweetened with a little sugar. Put some in shallow dishes and place throughout the house. This is a cheap poison and can be obtained at any drug store. Another good fly poison is cobalt chlorid, 1 dram dissolved in 3 ounces of water, placed in shallow dishes as above. This is more expensive than the bichromate of potash and is harder to obtain. To quickly clear rooms in which there are large numbers of flies burn pyrethrum powder or blow black flag into the air of the room. These do not kill the flies; they are merely stunned and fall to the door. They must then be gathered up and destroyed. Eliminate the breeding places of flies—this is important. The following should be done: Sprinkle chlorid of lime or kerosene over contents of privy vaults and garbage boxes and lime over manure piles and other refuse. Keep garbage receptacles tightly covered. Clean the cans daily. Clean the boxes every week. Sprinkle them with kerosene or chlorid of lime. The ground about the garbage receptacles should also be kept clean. Keep stable manure in vault or pit, screened and sprinkled with chlorid of lime. Manure should be removed at least every week. Pour kerosene into the drains. Keep sewerage system in good order, repair all leaks at once. Clean cuspidors every day. Keep a 5 per cent. solution of carbolic in them all the time. Don't allow dirt to accumulate in corners, behind doors, back of radiators, under stoves, etc. Do not allow decaying material of any sort to accumulate on or near your premises. If there is a nuisance in the neighborhood write to the Department of Health, 215 East Madison street.

Remember: No dirt—no flies.

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#### CHANGE OF LOCATION.

Dr. R. R. Jones has removed from Sherman to Lynville, Ill.  
Dr. T. A. Jones has removed from Metropolis to Eldorado, Ill.  
Dr. C. H. McDonald has removed from Decatur to Arthur, Ill.  
Dr. James Miner has removed from Joseph to Winchester, Ill.  
Dr. S. J. Heylmann has removed to 924 Hood avenue, Chicago.  
Dr. L. B. Jolly has removed from Gurnee to North Chicago, Ill.



Dr. Cary Culbertson has moved his residence to 1209 Washington boulevard.

Dr. Charles L. Tegtmeier, formerly of Smithton, Ill., has removed to Freeburg, Ill.

Morley D. Bates, M.D., has removed to Ashland boulevard and Van Buren street, Chicago.

Dr. James P. Quirk has removed from 1128 Washington Boulevard, Chicago, to Lyford, Tenn.

Dr. P. Gad Kittermann has removed from 2614 Cottage Grove avenue, Chicago, to Ottumwa, Iowa.

Dr. John Gibbs Lovell of 4823 Prairie avenue, Chicago, has removed to 514 Eitel building, Seattle, Wash.

Dr. D. S. Hamilton, formerly of 6458 Stewart avenue, has removed to Galesburg, Ill., 1066 N. Prairie street.

Dr. Paul F. Morf has changed his residence to 1448 Dakin street, Chicago. Hours: Before 8 a. m. and 4 to 6 p. m.

Dr. Bertha N. Hamilton, formerly of 6458 Stewart avenue, Chicago, has removed to Galesburg, Ill., 1066 N. Prairie street.

Dr. G. H. Banksdale of Chicago has been engaged to take the place of Dr. Schulz in the Fabiola Hospital at Eveleth, Minn.

Dr. Harry M. Hayes of Peoria, Ill., will spend a year in Vienna, Austria, studying. His address there will be % Anglo-Austrian bank.

Dr. Darwin R. Stockley has removed his office and residence from 1305 Maple avenue to 847 Chicago avenue, corner Main street, Evanston, Ill.

Dr. George W. Mosher wishes to announce that he has discontinued his office in Forty-Third street and that he will continue his practice at 34 Washington street, specializing in diseases of the chest, throat and nose.

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### MARRIAGES.

JAMES JOSEPH ROACH, M.D., to Miss Edna Nacey, both of Chicago, April 20.

ELAM T. MURPHY, M.D., to Miss Mabel Mary Brassil, both of Chicago, April 26.

ORLANDO F. SCOTT, M.D., Argo, Ill., to Miss Alma Elizabeth Ham of Frankfort, Ind., April 7.

FRANK E. THOMAS, M.D., Mason, Mich., to Miss Ada Lyon of Bowbells, N. D., at Chicago, April 20.

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### DEATHS.

ALBERT T. CARPENTER, M.D., Detroit Medical College, 1891; died in Chicago, May 3, from paresis, aged 38.

JOHN PORTOUS MORRISON, M.D., University of Michigan, Ann Arbor, 1868; died at his home in Chicago, from cirrhosis of the liver, May 1, aged 66.

ROLOFF JOHNSON, M.D., Northwestern Medical College, St. Joseph, Mo., 1888; died at his home in Normal, Ill., May 1, from disease of the stomach, aged 59.

GARRISON BROWN, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1878; died at his home in Crescent City, Ill., April 13, from pneumonia, aged 62.

MARINDA EMILY FULLAM, M.D., Northwestern University Woman's Medical College, Chicago, 1881; died at her home in Aurora, January 5, from paralysis, aged 68.

CORA LEE OUTCALT, M.D., Hahnemann Medical College, Chicago, 1902; formerly of Ottawa, Ill.; died at her home in Chicago, April 20, from carcinoma, aged 47.

LEONIDAS O. P. WOLFE, M.D., Rush Medical College, Chicago, 1866; of Mauckport, Ind.; died suddenly at the home of his brother in that place, March 30, aged 67.

JOEL EFF BUCKMAN, M.D., Barnes Medical College, St. Louis, 1904; of Modesto; died at the home of his parents in Farmingdale, Ill., May 3, from tuberculosis, aged 30.

HENRY BENJAMIN CRAGIN, JR., M.D., Rush Medical College, Chicago, 1901; of Chicago; died in a hospital in that city, May 27, 1908, from cerebral meningitis, aged 33.

ELWYN ASHWORTH HOLROYD, M.D., Rush Medical College, Chicago, 1879; died at his home in Chicago, May 13, from hemorrhage of the lungs, due to pulmonary abscess, aged 57.

WILLIAM WILSON COKER, M.D., College of Physicians and Surgeons, Chicago, 1888; L.R.C.P., Ireland, 1872; died at his home in Chicago, May 1, from cerebral hemorrhage, aged 69.

THEODORE PARKER CROSSE, M.D., Rush Medical College, Chicago, 1879; a member of the State Medical Society of Wisconsin; died at his home in Sun Prairie, April 20, from erysipelas, aged 53.

CHESTER M. CLARK, M.D., Berkshire Medical College, Pittsfield, Mass., 1849; for several years clerk of the village board and member of the school board of Galva, Ill., died at his home in that city, April 25, aged 82.

ALONZO LYONS WHITCOMB, M.D., Northwestern University Medical School, Chicago, 1874; a member of the Arkansas Medical Society; died suddenly at his home in Rogers, Ark., April 10, from cerebral hemorrhage, aged 60.

BENJAMIN ELLSWORTH DEVALL, M.D., Georgia College of Eclectic Medicine and Surgery, Atlanta, 1900; Chicago College of Medicine and Surgery, 1904; of Dixon, Ill.; died in the Lee County Hospital in that city, April 15, after an operation on the kidney, aged 41.

SOLOMON JACOB BEST, M.D. (License, Ill. Years of practice, 1877), a practitioner of Freeport for more than fifty years; said to have been the oldest member of the Stephenson County Medical Society; died suddenly from angina pectoris at his home, April 26, aged 71.

MELCHERT H. GARTEN, M.D., Rush Medical College, 1871, a prominent practitioner of Lincoln, Neb., died suddenly at his home in that

city from angina pectoris, May 6, aged 63. Dr. Garten was for twelve years a practitioner in Dover, Ill., before removing to Lincoln, Neb.

JOHN COX, M.D., an old settler of Christian and Shelby Counties, died at his home, five miles east of Vandalia, May 6. He was a soldier and served in the Union army for three years. He was among the oldest settlers of Pana, Ill. For the past ten years he had been living a retired life.

JOHN WRIGHT, M.D., former president of the Illinois State Medical Society, died Friday, May 21, at his home in Long Beach, Cal. Dr. Wright, retired for fifteen years, was for a long time the leading physician in Clinton, Ill., and in that section. He was a surgeon in the One Hundred and Seventh Illinois regiment during the rebellion. He was 83 years of age.

ALBERT H. SIMONTON, M.D., Cincinnati College of Medicine and Surgery, 1893; from 1898 to 1902 contract surgeon in the United States army and afterward chief surgeon of the Arkansas Southwestern Railroad; died at his home in Chicago, April 19, from the effects of morphin, believed to have been self-administered with suicidal intent, while dependent, aged 63.

NORMAN PITT SMITH, M.D., died very suddenly at his home in Paris, Ill., April 29, aged 62 years. He complained of indigestion and lay down in his office, where he was found several hours later dead. He was born near Delaware, Ohio, in 1847, attended Wesleyan College at Delaware, where he took a practical course, and then began the study of medicine, graduating from Hahnemann Medical College, Chicago, in 1881, when he at once engaged in the practice of his profession at Oakland, Coles County, remaining several years, where he enjoyed the highest standing, both professionally and as a representative citizen. He then removed to Paris, which has since been his home. He is survived by his wife and four children, one being Dr. Orrin Leroy Smith of Lexington, Ky. Dr. Smith was a member of the International Association of Railway Surgeons, the American Institute of Homeopathy, the Illinois State Homeopathic Medical Society, and the Edgar County Medical Society. Fraternally he was affiliated with the Masonic Order, Odd Fellows, Modern Woodmen, and Ancient Order of United Workmen.

D. W. ALDRICH, M.D., mayor of the city of Galesburg during the years 1887 and 1888 and one of the most skilled and best known physicians and surgeons in that part of the state, died on May 8 at his home in that city after a long illness. For some time the end had been expected, and yet the news of his passing away came as a surprise and was heard with general regret. For many years Dr. Aldrich has occupied a prominent position in his profession in Galesburg and surrounding territory and has been prominent in the state, military tract, and other medical associations.

Dr. Aldrich was a native of Illinois, born April 1, 1846. His father being a farmer, Dr. Aldrich spent his boyhood days on a farm. He attended the district schools, and later attended Knox College, and from

there, in 1869, entered Rush Medical College. He later matriculated at Bellevue Medical College, and from the latter institution he was graduated March 1, 1874, and four years later supplemented his knowledge by taking a postgraduate course in the same institution. From 1874 to 1880 he practiced medicine at Gilson, Ill., moving to Galesburg in May of the last named year. Jan. 1, 1886, he was appointed local surgeon for the C., B. & Q. R. R. with headquarters at Galesburg and served in that capacity up to the time of his death. He has occupied a position of high standing as a physician and as a surgeon of unusual skill.



D. W. ALDRICH M.D.

During his term as mayor in the city of Galesburg occurred the Burlington strike, and, although he met with a number of difficult situations, his administration was marked by efficiency and ability. While in the enjoyment of good health and until the decline began Dr. Aldrich had a practice second to that of no other physician in the county.

Jan. 1, 1865, Dr. Aldrich enlisted as a private in Company E, One Hundred and Forty-Eighth Illinois infantry and served to the close of the war.

The funeral took place on May 11 and was very largely attended, members of the Knox County Medical Society and other physicians from abroad attending in a body.







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